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WORDS NOT "REPRESENTATIVES" OF SIGNS, BUT OF IDEAS.

BY HARVEY P. PEET, LL. D.,
President of the New York Institution for the Deaf and Dumb.

When Mr. Jacobs affirms that "When he [the mute] ceases to connect in his memory the object, or in its stead, the sign he has adopted for it, with the written word, (horse,) he ceases to know the meaning of the word,"—he utters a truth as obvious as that when the moon ceases to shine, the nights grow dark. We submit, however, that Mr. Jacobs' "statement of facts" may be expressed in a form both more brief and more general. The alternative, "or in its stead, the sign," etc., may be rejected as pure surplusage; for what would be the use of "connecting" the word with a sign, if the sign did not, in its turn "connect in the memory" with the "object," or rather, with the idea of the object? If the word recalls the sign, the sign must recall the idea, or obviously the "meaning" is lost just as much as if there was no sign in the case. Mr. Jacobs' proposition then, is only equivalent to this; when the deaf mute, (or we beg leave to add, any body else,) ceases to connect suitable ideas with the word *horse*, (or any other word,) he ceases to know the meaning

of the word. "Every unprejudiced mind must recognize this statement of facts to be true." But how does it "avail" Mr. Jacobs?

Neither, in our view, does it make any difference, either in the "facts," or in the logical conclusions from them, if the word represents some general or "abstract idea,"—"*government*," for instance. When the deaf-mute, or the speaking person ceases to attach correct ideas to that or any other word, he "ceases to know," (if he ever did know,) its "meaning."

We are aware that this is not Mr. Jacobs' view of the case. He holds, as nearly as we can understand him, that the deaf-mute cannot attach directly to written words any other ideas than the images of visible objects. On this point we appealed to *facts*. Mr. Jacobs replied by *hypothesis*, such as that of a speaking person learning certain Hebrew words by the eye alone, without any idea of their sound. Does Mr. Jacobs know of any case in which such an experiment was tried? We *guess* not. If it should be tried with a speaking person, as perseveringly as the same experiment (substituting English for Hebrew words, if you please,) has been tried with deaf-mutes in some of our Institutions, the result might not exactly correspond to Mr. Jacobs' expectations; for he will please observe that our "admission" "that we cannot (with our present mental habits,) attach our ideas directly to the visible forms of words," was only because we are not accustomed to recollect and repeat those forms of words independently of the sounds they represent; and that the difficulty for us, is just as great for the word *horse*, or *elephant*, as for the word "*government*," or *duty*. Agreeing with Mr. Jacobs that "it would be strange indeed if there were a *radical* difference in this respect between deaf-mutes and us," (though we know there is a great difference in mental habits,) and holding that it is much safer to argue from facts to hypothesis, than from hypothesis to assume facts,—we venture to affirm that if any body, deaf-mute or not, has acquired the faculty of remembering and repeating an "indefinite" number of Hebrew words, or words of any other

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written language, without considering them as the representatives of spoken words or signs, then he can be led to use them as the direct signs of ideas, whether they represent visible objects, or abstractions.

For, Mr. Jacobs will please recollect that the "connecting" written words with visible "objects," which he so distinctly admits to be quite in the natural course of things in certain circumstances, is nevertheless, just as contrary to general experience as the connecting them with abstract ideas. The difficulty with *us*, and there being no "*radical* difference," with the deaf-mute as well, is to acquire the habit of remembering and repeating, (visibly or mentally) the written word, as a mere visible form,—not in the kind of ideas we attach to it. And we know that deaf-mutes, even though taught by colloquial signs, use words as the direct signs of abstract ideas, quite as readily as they do for visible objects. Take any word you please, explain its meaning, by examples in pantomime, and you will find it makes no difference (provided the idea is clearly developed,) whether it represents some sensible object, action or quality,—or an abstract idea (as color, time, experience, hurry, hope, etc.) If the pupil has no simple and convenient sign for the same idea, he will use the word given him as a sign. If it were not so, the teaching by colloquial signs would be mere delusion or pretense.

But, says Mr. Jacobs, "let it be particularly observed, for this is the gist of the question, that in the first instance, he (the person learning Hebrew words by sight alone,) did not think in the written word alone, but in the object itself, and in the written word, when he had occasion to use it, in connection with the object." Let it be particularly observed, we reply, that so far as this statement conveys anything favorable to Mr. Jacobs' peculiar views, it is a mere assumption, built upon a hypothesis. With all respect, we submit that Mr. Jacobs' mere opinions, as to what an imaginary person might do, in circumstances that probably never existed, ought not to outweigh notorious facts.

And these facts, we maintain, ought in all reason to "avail"

us, even though we prefer the expeditious process of teaching the meaning of language by signs, instead of the slower one of developing it by usage. For our facts show that not only do deaf-mutes learn words and phrases by usage, but that they accept as the direct signs of ideas, words explained to them by colloquial signs or pantomime, and farther that they sometimes forget through disuse, signs they once used, while they retain the corresponding words. What more is needed to support our position that deaf-mutes do not need a sign for every word, but may, and we think ought to be trained to get the meaning of what they read directly from the visible words before them; just as we do of Latin or French, when sufficiently familiar with those languages?

Mr. Jacobs asks, "How can the association formed between written words and signs be broken, so long as the meaning of the words is retained?" Just as easily as we sometimes forget a person's face while we remember his name, or even his coat; and *vice versa;* or just as easily as we understand Latin words without thinking of the English words which were used to explain them. When we know that a thing is done, such queries seem out of place.*

Again he asks, "Is it not obvious, that if the written word becomes the representative of the spoken word to the speaking person, it equally and as necessarily becomes the representative of the sign to the deaf-mute?" Not at all; no more,—to repeat one of the illustrations in our former article,—than the French word *heureux* becomes the representative of the English word *happy.* The association between the sign and the word is just like the association between the corresponding words in radically different languages; the only connection is in their expressing the same idea. The association between spoken and written words is in that corresponding succession of parts by which the mere sight of the written word, (if we know the alphabet,) determines

* Mr. Jacobs seems, in this and other places, to confound signs with ideas. Surely the signs for many words are at first sight, as arbitrary as the words themselves. It is by usage and explanation that the one and the other equally acquire significance.

what spoken word it represents. The two cases are certainly very different.

Mr. Jacobs justly observes that "the order of his (the deaf-mute's) thoughts is inverse to the order of written words, and when he comes to express himself in the latter, he is prone to place the words in the order of colloquial signs." This fact would "avail" Mr. Jacobs much more if *he* proposed to discard colloquial signs altogether. But *we* do not understand him to propose to disuse colloquial signs. "Not at all." In his concluding paragraph, he "expressly" says, "that when ideas, facts, impressions, and not the use of language are the chief objects of communication, as in giving religious instruction, telling a story or narrative, &c., I (Mr. J.) would of course use colloquial signs." And in another place, he states that before making the "signs in the order of the words" for a new lesson, the teacher should explain freely by colloquial signs, the meaning of the words separately and individually." (In a third place, he says, "There is no necessity, as a general thing, for any "round about method of explaining methodical signs by colloquial signs, either before or after, as Dr. Peet gratuitously supposes." If every word is explained by colloquial signs, and with Mr. J. words only represent methodical signs, is not that equivalent to explaining the methodical signs by colloquial signs? But we have not time to dwell on this point.) So then it seems that Mr. Jacobs has to use colloquial signs whenever he would directly and certainly reach the understandings of his pupils. It follows that his pupils think habitually in the order of colloquial signs, and that he confirms them in doing so, by using colloquial signs whenever he has anything new, interesting, or impressive to communicate. If his "signs in the order of words" are reserved for set lessons in language, we do not see how their use will familiarize the pupil with the order of the words, more than will the simple use of the words themselves, after the words have become familiar things to the pupils. Indeed it seems reasonable that it should be easier to remember the order of words, than of methodical signs. The latter is a forced and unnatural order, the more so the

nearer Mr. Jacobs' signs for words approach "the significancy and spirit of colloquial signs." The order of words may seem natural, or at least, appropriate to them. The arrangement of his signs in the order of English words must always seem unnatural to the deaf-mute. He may become accustomed to it by repetition; but the experience of many teachers who reject methodical signs, shows that he equally at least becomes accustomed to the order of words by repetition. What then is the gain by the use of methodical signs, in this respect, to balance the immense labor of inventing or learning signs for so many thousand words?

We have expressed the opinion that where the teacher possesses, like Mr. Clerc and some others, that power and facility in the language of signs that will enable him to interpret simple sentences clearly word by word, in the order of the words,—in such hands methodical signs will be useful in the earlier lessons. If Mr. Jacobs thinks this "a sufficient admission" in favor of his theory, either he is easily satisfied, or the real difference between us cannot be great. But surely he would not assume, because a teacher of Latin was favorable to literal translations word for word, in the beginning, (selecting of course, such lessons as would best bear such translation,) that therefore he would sanction the absurdity of repeating some English word for each Latin one in the Latin order, when his pupils get into the classics?

Mr. Jacobs' remarks on synonyms do not seem to us to be well considered. He could not have read with "unprejudiced" attention, our remarks on words being to the deaf and dumb, not representatives but synonyms of their own signs.* Surely he knows that a synonym strictly and simply means a word of the *same* meaning with some other word (or sign). The term is loosely used for words that only approach in meaning; but we do not see how any attentive reader could imagine we meant to use it in that sense. Can

* Words are often synonymous with other words in one connection, but not in another; and every reader of the Annals knows the case is the same in respect to signs and words, the signs that correspond to words in one connection do not in another connection.

it be necessary to illustrate the obvious distinction between a synonym and a representative? The written word *seventy*, and the figures 70, both serve us as *representatives* of the spoken word *seventy*. The first thing we do at the sight of either, is to say to ourselves "*seventy*." But the Latin *Septuaginta*, the French word *soixante-dix*, etc, (and we may add the English phrase *three score and ten*,) are not representatives, but synonyms of *seventy*. We *can*, and when they have become familiar, do read and understand them without repeating the English word. As we have repeatedly stated that the association between words and signs is comparable to that between the corresponding words of different languages, we can only ascribe Mr. Jacobs' attempt to give our remarks "an intelligible signification" so wide of our meaning, to his inability to look at this subject through any other glasses than his own. And he immediately goes on to assume the whole point in dispute by saying; "But the written word has no independent meaning to the deaf and dumb,—it is the sign which vitalizes—which makes it a living thing to the mute," etc. (The allusion to Ezekiel's wheels we greatly admire as a rhetorical flourish, but it is not an argument.) We beg leave to submit that it is the *idea* that "vitalizes" both the sign and the word. Let Mr. J. make his signs in the order of the words for the Lord's prayer, for instance, to some intelligent man, entirely unacquainted with signs, and he may recognize what he seems in danger of forgetting, that making signs is not exactly the same thing as conveying ideas.

Mr. Jacobs lays much stress on the explaining each word (by colloquial signs,) before combining it in sentences. We are curious to know whether this previous explanation should embrace the several different senses of the word, or only the sense in which it is used in the lesson more immediately in view. As a mental exercise, it is well occasionally to let the pupil make out, if he can, the meaning of a sentence, or little narrative, each word of which has previously been explained. But we would prefer to let him do it from the words alone. If after each word has been separately and individually ex-

plained by colloquial signs, the teacher makes or assists the pupil in making the signs for every word, (which in our view, as we have before intimated, is equivalent to explaining the methodical signs by colloquial signs,) if the signs in the order of the words are made so as to be intelligible, the pupil is saved the labor and exercise of independent thought; and if not intelligible, what is the use of them?

We believe we have now answered whatever was material in Mr. Jacobs' last article. We found nothing in it to change our views; and do not flatter ourselves that any thing we have advanced will change his. The discussion however, may be not without interest and benefit to younger teachers.

Of Mr. Jacobs' "honest desire to promote the best interests of deaf-mute instruction," we did not need to be assured. And it is a source of regret that the same honest desire compels us to differ from and controvert his opinions.

ST. ANN'S CHURCH FOR DEAF-MUTES, NEW YORK.

BY REV. THOMAS GALLAUDET.

The following sketch will give some idea of the progress of this Church during the year commencing with the first Sunday of October, 1857—the sixth year of our undertaking. Owing to the mercantile revulsions, it was deemed expedient to make no special appeal for the increase of the building fund. Only a comparatively small sum was therefore received. The building site in 26th st., four lots, continued to be held free from debt. Enough was received into the parish fund from the Sunday offerings from Trinity Church, and from various persons interested in our welfare, to pay all expenses, and to do more than any previous year towards the support of the Rector. The fund for the sick and the poor received a sufficient sum to provide for the necessities of all who were in want. It was a gratifying announcement for the Sixth Anniversary, Oct. 3, 1858, that the Church was perfectly free from debt. It is to be hoped that our motto may ever be the apostolic injunction to owe no man anything but to love one another.

During the year there were 11 baptized—3 adults (2 deaf-mute,) and 8 children (3 of deaf-mute parents); 9 confirmed, (4 deaf-mute,) one of the latter, a female, from the upper part of the State, being in the city on a visit, receiving the rite in Trinity Chapel;—4 couples married, (1 deaf-mute); and 6 burials, (2 for the remains of deaf-mutes.) There were 18 communicants added, (5 deaf-mute,) and 3 removed from us, (2 deaf-mute,) making the whole number 64, (31 deaf-mute.)

The marriage service for Mr. H. C. Rider and Miss H. A. Chandler, the deaf-mute couple referred to above, was performed in the Presbyterian Church of Mexico, Oswego Co., in December, 1857. It was witnessed by a crowded assemblage, the most of whom had never before seen the silent language used. The hearts of all were evidently touched, and a permanent interest aroused in that portion of the community for whose welfare we specially labor.

John Edward Vanderbeck and Asahel Andrews, Jr., were the names of the two deaf-mutes recorded upon our gradually lengthening list of the dead. They were both graduates of the N. Y. Institution for the Deaf and Dumb. The former was sick a long time with consumption. The latter died after a short illness, quite unexpectedly. There was good reason for hoping that both were prepared for the great change which came upon them, and for the Redeemer's sake were admitted to the joys of Paradise. At his urgent request, Mr. Andrews was baptized on the very day of his death. The sacrament was at the same time administered to his deaf-mute wife. It was a most touching scene.

In these sketches for the Annals, special reference to deaf-mutes seems appropriate,—though interesting statements in relation to the other portion of the Parish could be given. There occurred one very striking instance of the shortness and uncertainty of human life. At the funeral of a lady, her only son seemed in perfect health. In one week, his remains were placed in his mother's grave. A singular coincidence was the following. The body of a young man who had died of yellow fever, in the West Indies, more

than a year before, arrived in New York. His father, knowing nothing of this, was taken suddenly ill, and died the next day. The two bodies were buried in the same grave, on the following Sunday.

A full record of all our Parochial work would show that the idea with which our Church started, is gradually, yet surely, working into a reality—*i. e.* a regular Parish, bound together for the special object of promoting the temporal and spiritual welfare of adult deaf-mutes, having three services every Sunday, morning and evening with the voice, and afternoon by signs. We are more and more convinced that we have been led to adopt the only method by which a church for deaf-mutes could be permanently sustained.

The great event of the year was our removal on the 1st of November, 1857, from the smaller chapel of the university, where we had worshipped for five years, to the beautiful and church-like lecture room of the New York Historical Society. Though it involved much greater expense, the removal proved judicious and successful. The credit of the original suggestion belongs to Mr. William L. Gallaudet, a gentleman to whom the church has from the beginning, been greatly indebted for its music.

As an account of the public meeting of the friends of our undertaking, held on Wednesday evening, May 19, 1858, has already appeared in the Annals, it will not be necessary to say anything more in relation to the proceedings. The resolution to raise $1,000 in $10 subscriptions toward the salary of the Rector for one year from October 1st, 1858, thus enabling him to resign his connection with the Institution, and devote himself more fully to the interests of the Church, speedily met with general favor. The proposed sum having been made up, the Rector, with many regrets at leaving kind friends and pleasant duties, delivered his farewell lecture on the last Sunday of September. It was a gratifying feature in this separation, that the venerable President of the Institution bade his retiring friend a cordial god-speed in the enlarged sphere of operations upon which he was about to enter. God grant that the Institution and the Church may always

sympathise with each other, and feel that they are laboring in different ways for the same great end, *i. e.*, the amelioration of the condition of the deaf and dumb in this world, and leading them to attain at length unto eternal life.

During the summer, the Rector had opportunities of presenting the claims of our cause at St. John's Ch., Hartford; St. John's Ch., Buffalo; St. James' Ch., Chicago; and St. Peter's Ch., Albany. Services for deaf-mutes were held in the three latter places. Much good was thus accomplished both among deaf-mutes and among hearing persons, many of the latter receiving for the first time, clear ideas in relation to the sign-language. The thought was strengthened that with our church fairly established in New York, possessing the ability to sustain an assistant understanding signs—we might minister to many deaf-mutes in distant places in these days of rapid traveling. A great work is yet to be done for the educated deaf-mutes of our land.

During the year, those deaf-mutes who attended the evening service, had frequent opportunities of having the sermons of other clergymen translated to them by their Rector, thus becoming acquainted with different styles of thought and various methods of treating the same subjects.

The weekly Thursday evening gatherings of deaf-mutes for intellectual improvement in secular matters, were continued until the warm weather began.

The writer can not close this brief sketch of another year's progress without referring to the very pleasant times which he had at the Conventions, of the Instructors of deaf-mutes at Jacksonville, Ill., and of the New England Gallaudet Association which was held in Worcester, Mass. They were impressive sights, those gatherings, the one of men laboring to devise means to improve the education of deaf-mutes, and the other of intelligent, substantial, respectable deaf-mutes of all ages, coming up from the farm, the work-shop, the store, the manufactory, to extend to each other a kindly greeting; to stimulate each other to renewed exertions in the pathway of duty, and to ask for God's blessing upon their silent community. Should such gatherings as the latter be started in

other sections of the country, good effects could not fail to follow. Those who have once experienced the pleasures of attendance upon a Convention of the Instructors of deaf-mutes, can not help wishing for another to come as soon as practicable.

Friends of deaf-mutes, we have worked during six years to promote the welfare of adult deaf-mutes. We have established a working Parish, in which they are the special objects of attention and care. We have led many, we trust, to become, by God's grace, sincere Christians. We have ministered to the sick and the dying. We have counseled those in trouble. We have found situations for those out of employment. We ask your sympathy, your co-operation and your prayers for complete success—to be reached only when we can worship in a church of our own.

N. B. Deaf-mutes and their friends visiting New York, will please remember that our Sunday services are at the corner of Second Avenue and Eleventh street, and our weekly Wednesday evening gatherings at No. 24 Cooper Institute.

WORDS RECOGNIZED AS UNITS.—SYSTEMATIC SIGNS.

BY JOHN CARLIN, OF NEW YORK.

FRIEND PORTER:—I send you this letter for insertion in the January number, if it is not too late. I read with interest the paper of Mr. Jacobs, in the October number, treating of the signs in the order of the words; and also Mr. Burnet's, with your reply, with reference to the forms under which deaf-mutes apprehend words.

I agree perfectly with Mr. Jacobs, in the importance and practicability of his mode of facilitating the deaf-mute's language, for I have always condemned, and still condemn, the excessive use of colloquial signs in the school-room. In sustaining the correctness of his "theory," I shall here make some observations suggested by my own experience, show

the real causes of the deaf-mute's want of fluency in spelling on the fingers, writing and reading; and to improve if possible his method, propose a few modes of systematizing the machinery of his thought. Still feeling the warmth of friendship existing between myself and the sturdy knight of Livingston and the modest knight of Hartford, who have just commenced a tournament promising to be memorable in the *annals* of history, I shall refrain from saying which side I take of this controversy; but my sagacious readers may find out, by seeing straw flying, where the wind blows from.

As to the forms under which deaf-mutes apprehend words, my experience—a born deaf-mute's—tells me that, in reading prose, I recognize written and printed words as *units*—no matter if they are as long as "incomprehensibility," &c.; and that by their visible characters, just as you would recognize at a glance a friend's face by its lineaments. The meaning of each word recognized as an unit is understood simultaneously. Though words and their meaning may be recognized at a glance, the definite yet hidden idea of a sentence, of which they are composed, is perceived and understood only when the sentence is complete and in its perfect sense. Imperfect or complicated sentences sometimes baffle my mental perception.

In foreign languages, the words as units are as recognizable as the English; but in phraseology, I mean foreign, it requires much study to ascertain the subtile sense of whatever phrase may pass under my eyes, as the foreign phrases, idiomatically speaking, are so different from those in English. For example, in the Spanish, which you know is very copious, there are two auxiliary verbs for the term, TO BE,—as *ser* and *estar*, which however occasionally similar to each other, are essentially different in sense. BUENO is an adjective for *good*, in English.

El es bueno, He is good.
El esta bueno, He is well.

Thus, it will be perceived that the last verb (estar) changes *in toto*, the sense of the adjective.

In poetry, I read words *syllable by syllable.* It is proper

to state that, notwithstanding my congenital deafness and my having no idea of syllabic sounds, I studied several years ago the principles of versification. In this study, I found it necessary to learn as many syllables as I could, and their accents,—they all being spelt *letter by letter*, on the fingers; as, Incense (In-sensé), Incense (In'sens), Knowledge (Nol'-lej), etc. In order to render myself master of the rhythm, I read lines of poetry—for instance, Gray's Elegy,—at first so slowly as to note with accuracy long and short syllables, accents and cæsural pauses; by that process my mind unconsciously acquired a habit of reading poetry, syllable by syllable. So fixed is this habit that it is impossible for my mind to *glide* over verses without taking cognizance of their long and short syllables. I confess, for that reason, reading poetry is not as pleasant now as it was fifteen years ago.

From Mr. Burnet's remarks: "If deaf-mutes possessed the power of conceiving and repeating words as *units*, the words simply passing through the mind under the written form as single characters, they ought to be able to read faster than we do, whereas, I believe the contrary is notoriously the fact." I infer that all hearing persons conceive and repeat words by syllabic sounds only. Do they *invariably*, Mr. Burnet? In my mental vista, as well as other mutes, I have ascertained, words appear suddenly as *units* in written characters,—exactly as the familiar face and expression of our late friend, Dr. Gallaudet, with his spectacles on, would in yours; but if on the fingers, (always *sine corpore*—a phenomenon I cannot account for,) they are spelt letter by letter. Much oftener signs represent them than do their written characters. Perhaps it is worth mentioning that our mental signs are a sort of phantoms, visible in some parts and invisible in others; as an example, for the sign, *good*, our mental eyes see the hand, lips and *nothing else*.

If the hearing really recognize words by their syllabic sounds only, the deaf-mutes, recognizing units, should of course read faster than they do; yet Mr. Burnet with much truth says to the contrary. How came this paradox? He has not solved the problem. On my part, I can safely aver that it is

attributed to our philological poverty, which causes us to pause at every strange-looking word; to our imperfect knowledge of English grammar, especially the syntax; to our excessive use of colloquial dialect, *i. e.*, the jargon of gestures, which, by its irregularity and disconnectedness of language, deranges our understanding of the syntax.

Now, seeing the advantage of the deaf-mute over the hearing in recognizing words as units, and the vast importance of teaching him words, letter by letter, of course, I would respectfully suggest that, for the one-year, two-year and three-year classes, easy and familiar words should be taught by appropriate signs, on the fingers, and by writing; and that the simple rules of grammar should be explained in *the signs in the order of the words*, as recommended by Mr. Jacobs.

As the pupil needs but one systematic course of study, I would, were I his teacher, employ signs in the order of the words, which, for brevity's sake, I would call systematic signs, in relating all examples, illustrations, sentences and stories, the colloquial signs being altogether dispensed with.

To gratify curiosity as to the modus operandi, I shall explain my method, which I believe is the same as adopted and practiced by Mr. Jacobs. Perhaps a few words may suffice to give you a clear idea thereof. All know that colloquial signs, however beautiful in good sign makers, always appear barbarous—outlandish—jargon-like, when literally translated in words. For example, an incident is thus related: "Yesterday field that I walk see a boy fight boy another." But in systematic signs, retaining all the graces and flexibility of the above signs, that narration would begin thus: "Yesterday I walk—that field—see a boy fight another boy." This looks grammatical. And the hiatuses in this sentence are left expressly for my pupil to fill up with a preposition and a conjunction, and the tenses of the verbs to be spelt correctly in accordance with the time expressed by the first sign. Thus, my pupil's reflective powers are properly exercised; and his mind, systematized by this process, will ever treasure and employ the grammatical arrangement of the

words expressed by my signs, as a *guide* in his own compositions.

With the view of rendering himself master of the art, the teacher will have to practice systematic signs while his eyes are passing over words.

It is proper to remark that deaf-mutes' colloquial signs are often accompanied by grimaces, and laryngean creakings, extremely disagreeable to the ears; but in the exercise of systematic signs, these accompaniments are impossibilities, for a systematized mind regulates all things.

I confess I do not understand why Dr. Peet should labor to prove that the colloquial signs are the soul of our system of instruction, whereas I consider the English grammar really as its soul, vitalizing the deaf-mute's intellect, regulating his language and facilitating his expressions. I myself would certainly keep the grammar* constantly in view before my pupils, throughout their term of pupilage.

To the four-year and more advanced classes will be given new words, explained by means of familiar words combined together, and that without signs. One example is sufficient, I suppose. For the verb, to *Treasure*, write on the large slate the following words which the pupil will recognize as old units:—

To Take

Put in

Take care of } To Treasure.

After being duly spelt,† this verb, to *Treasure*, will be treasured in his memory, to appear at his bidding as an unit in letters. It will be perceived that his mind, amply stored with *units*, together with the rules of grammar, shews that the defect of his *meatus auditorius*, *membrana tympani*, *or ampullæ*, though a drawback on his auditory enjoyment, is not a

* I intend writing for the next number, about a new book—The Deaf-Mute's Guide—much needed by both pupils and graduates.

† The deaf and dumb, both pupils and graduates, will be able to spell at once new long words and names, by looking carefully over them and recognizing short familiar words within them,—as, for Mississippi,—Miss-is-sip-pi(e). They will find it as useful to them as it has been to me.

serious impediment to the operative machinery of his thought in verbal forms, and to the fluency of his written language.

Perhaps you, my dear Editor, will agree with me that this method, with such practical modifications as may be suggested, is better than any "machine" whatever,—the invention of which you wished to be made by some "inventive genius."

IS IT EASIER FOR DEAF-MUTES TO SPELL WORDS MENTALLY, OR TO REGARD THEM AS *UNITS?*

BY JOHN R. BURNET, of Livingston, N. J.

[Mr. Burnet sent us, along with this communication, a note apologizing for the haste with which it was prepared. He says "I give you full permission to cut down or abridge. The object of both of us is to get at the truth, not to get an advantage." We have thought it best to present his ideas in his own words in full; and, for brevity's sake, have interspersed our remarks, in brackets, as we found occasion. We trust Mr. Burnet will accept the motive as an excuse for so interrupting the thread of his discourse.—EDITOR.]

MR. EDITOR, I agree with the greater part of your remarks on my communication in the Annals for October. Still there remain some points of difference, which as you invite me to pursue the subject, I will set forth. Very possibly we may arrive at an agreement, at least on all the material points involved.

You justly complain of the comparative slowness of the methods now in use for repeating words to the eye; and ask: "Is it possible to contrive any means of presenting language, in a written or printed form, which shall afford the advantages desired?" Since you attach so much importance both to the *permanence* with which the characters may stand before the eye, and to the ability to produce them rapidly word by word, as the thought and occasion call for them, I am surprised that you never once mention *stenography* among the possible contrivances that might aid a teacher of deaf-mutes. Some twenty-five years ago, at the same time that I was at work on my syllabic alphabet, I also devised a system of

stenography, adapted to the use of the deaf and dumb. My idea was that as they know not the distinctions of vowels, consonants and silent letters, what they needed was a system capable, not only like the common systems, of abbreviating words, but also of spelling them at full length. Hence my alphabet gave some of the simplest marks to the vowels, and had a distinct mark for every vowel and distinct marks for letters expressing the same sound, as *k* & *c*. I cannot, of course, lay it before the readers of the Annals, for want of type; but I annex specimens for your own consideration.

[Stenography is a subject to which we have never given much attention. Mr. Burnet's characters appear to us, however, to have a general resemblance to those of some of the systems which were employed before phonography came into fashion. *A* is a straight line sloping upwards to the right; *b* is a loop and a line sloping downwards to the right; *c* a curve concave to the right; *d* a line sloping downwards to the left; *e* a horizontal line; *f* a line curving downwards to the right; *g* a curve concave to the left; *h* a loop and a line sloping downwards to the left; *t* is a vertical line. These will give an idea of the whole. There are also characters for double letters, and for some syllables of frequent recurrence.]

Now, from these specimens, don't you think characters for words can be devised, in which no letter shall be omitted, yet which can be written, (after sufficient practice) twice or three times as fast as by our usual alphabet, and at the same time, form a much more simple character to the eye? In rapid writing, letters will no doubt run into each other, making it difficult for a beginner to *spell* them out; still they will be in general, recognizable by one familiar with their appearance in this dress.

[There is this to be said against Mr. Burnet's stenography. Common writing consists chiefly of a series of parallel strokes up and down; whereas in these stenographic characters, the pen is moved in constantly changing directions. On this account, the gain in rapidity of execution would not probably be so great as might seem, considering the sim-

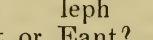
plicity of the characters. Greater precision, involving loss of speed, would be required, we think, to make the writing sufficiently intelligible. Another point also is to be considered. The deaf-mute in our schools, is now taught words under three different forms, *viz.* writing, print, and the manual alphabet. If we adopt stenography, we add still another. In making use of this, the deaf-mute will have either to attach his ideas directly to the stenographic form of the word, or will have to carry on a mental substitution between these characters and those of some one of the other orders, *viz.* writing, print and the manual alphabet. The same is true in respect to each one of these different forms: he must either attach his ideas directly to the words under each of these forms, or must, in the case of some of them, make the connection indirectly, through that particular form to which the idea is directly attached. The question is, whether the effect of multiplying the forms, will not be to encumber and confuse the mind, so as to hinder its fastening upon anything with a firm grasp. Such doubts and questions would best be solved by experiment. We should like to see a fair trial made of this stenography of Mr. Burnet's. We regret that we have not the means of exhibiting to our readers the specimens before us.]

And such a mode of writing would suit far better than the common one, with your idea of a transparent slate; inasmuch as its characters take less room, as well as less time to write them. By the way, this experiment of a transparent slate could easily be tried with any ordinary pane of glass; nor need the teacher practice himself in writing backward, since it would be much easier for his pupils to acquire facility in reading an inverted writing. Still, it will be difficult to write and look your pupils in the face at the same time, with even a transparent slate. Your attention must necessarily be drawn more or less to the writing, whereas, in spelling by a manual alphabet, whether *literatim* or *syllabic*, you have no need to watch your fingers at all, and can give the whole power of face and eye to enforce the meaning, and command attention. It is for this reason, after bestowing about equal

labor on the stenography and the syllabic dactylology, I concluded the latter promised to be far the most useful, and gave up farther experiments with the former.

For, this fugitive character of the manual alphabet of which you complain, besides being a characteristic it possesses in common with speech itself, is much less obvious and disadvantageous with a syllabic alphabet, especially with a language like our own, so abounding in monosyllable. In spelling *literatim*, each letter must be retained in the memory, till the word is completed, (sometimes if the spelling is rapid and indistinct, till half a sentence is completed, the words often being run into one another, e. g., Ou rfatherwho art inheaven, &c,) while by a syllabic alphabet a whole syllable, often a whole word, is presented at once.

There is another contrivance that occurs to me, for simplifying the forms of written words, thus making them more easily recognized and remembered as *units*. It consists in writing part of the letters one over another. Would not the word *Elephant*, for instance, look more like a simple character,—be easier to recognize and remember, as a mere character, if it were written thus, Eehnt or Eant? [Not at all, we think. In fact, the difficulty alluded to seems to us wholly imaginary.] And when it has become familiar in this form, you can abbreviate it, by taking the first and last letters, and supplying the intermediate ones by strokes, e. g. E — nt. To pursue this idea, the strokes may be made oblique for a *verb*, horizontal for an *adjective* or adverb, and perpendicular for a *noun*. E. g., b | | r, butter; b\ \ r, (to) butter; b = r, bitter. The number of strokes, one for every two or three letters, would thus measure the length of the word. I merely throw this out as a crude suggestion, from which others may possibly elaborate something useful.



And certainly, if we propose that our deaf-mute pupils shall use words as the direct signs and instruments of thought, it greatly behooves us to simplify the visible forms of words for them. I maintain that the usual manual alphabet is both more simple and much more expeditious than

ordinary writing, inasmuch as it expresses each letter by a single movement, whereas in writing, each letter requires two or more strokes of the pen. Hence in part the preference which most deaf-mutes evince for the manual alphabet. And hence the preference which I would accord to a syllabic manual alphabet over any system of stenography.

The main objection, so far as I know, made to my syllabic alphabet, is that some of the positions would not be readily legible to a whole class at once; the one hand or the other hiding some of the positions and contacts from some of the extremes in a wide semicircle of pupils. This, I think, can be got over by practice, and a little modification of some of the positions. The syllabic alphabet of M. Recoing was free from this objection, but it was liable to the greater one that its positions were nearly all arbitrary, and moreover represented not syllables, but groups of letters. Instead of about thirty independent characters, the number on my plan, that of M. Recoing imposed on the memory the labor of recollecting several hundred. Such at least, is the idea I formed of it, from reading Bébian's strictures on it.

With respect to the mechanical contrivances you speak of, for rapidly exhibiting words by means of a machine with a "finger board," I would observe that if words are thus to be exhibited letter by letter, I doubt very much if such machines will surpass, or even attain, the rapidity of the present manual alphabet; the "finger board" cannot be played quicker than the fingers can move. And if it is proposed to produce whole words at once, (or even syllables, of which our language has thousands,) it would, I fancy, require a Briareus, with a hundred hands, and a head equivalent to fifty, to play such a machine. Still I would not discourage the efforts of any "inventive genius."

Returning from these digressions; leaving what *may be;* and considering the alphabet and the processes actually in use; I observe that you seem to agree with me as to the habit of most of the deaf and dumb, [not so; not of most of them, but of some of them, and to some extent,] to repeat words mentally under the form of finger movements; and also that this men-

tal process cannot go on beyond a certain rate of progress, corresponding to the number of movements. I think you are not quite correct in saying we cannot follow the movements mentally faster than we can actually make them "in an indistinct manner." It is my impression that words may pass through the mind much faster than they can be actually spoken or spelled, however indistinctly, and certainly with much less fatigue; but the rate of progress is certainly proportioned to the *number* of successive movements or perceptions. [We retain the opinion that it is conformed, not of course or altogether to the number of the movements, but to the rate at which we can perform them.]

I say successive movements *or perceptions*, because, in my own case, as nearly as I can judge, words do not pass through my mind as movements of the vocal organs, but as *sounds*. After more than forty years of as total deafness as any human being ever was afflicted with, I cannot be positive on that point; for all *other* reminiscences of sound have long since faded from my memory. Still the reading of any lively piece of poetry causes the words to ring in my ears. And it requires a slight effort of attention to have in mind as I read, the movements of the vocal organs required to pronounce the words. But this is another digression, though suggested by your supposing what I "would say of my own case."

[We do not believe, taking Mr. Burnet's account of his own experience, as he gives it, that he has any idea of the sound of words other than of mere beats and movements, or sensations connected with movements of the vocal organs. We do not mean that his perception involves any special attention on his part to the movements of the organs, as such, that is, as motions in space, so that he should be able to describe or delineate them, or that he is much attentive to the location of the sensations. A dancer may know, or may not know, much about the curves or lines described by his feet; and very likely does not know at all how his knees, and shoulders and head move at the same time. He is necessarily conscious only of the sensations connected with his

movements, and not fully, or necessarily at all, aware of his movements as motions in space. When Mr. Burnet could hear, there were to him certain sensations of sound indissolubly conjoined with certain sensations of utterance. He was led to regard the ear as the chief seat of the sensations and even of some of the emotions, awakened by poetical recitation; and such of them as he is still sensible to, he continues to locate in the same organ. We believe, however, that what he retains, is the greater part of what most people ordinarily perceive in the melody and the flow of verse. The lines seem to them easy or rough, lively or solemn, or stately, or smooth or harsh, more in reference to movement in utterance than to sound in the ear. This is shown, when verses, previously well appreciated, are invested, by the voice of some gifted speaker, with a charm quite new and not conceived before, and dependent not merely on the propriety of the recitation, but mainly on the quality of the voice. The correspondence of sound (so called) to sense, aside from the direct imitation of sound itself, has relation to the utterance more than to the ear. When "the line, too, labors and the words move slow," the labor is in the utterance, not in the ear, and the slowness is in the utterance, and only thus in the ear.]

Agreeing with me [only in part, we repeat,] as to the habit of the deaf and dumb to repeat words letter by letter, you think it can be overcome, [our observation also convinces us that it is in fact overcome,] just as a child gets over his habit of spelling words, as he improves in reading. I am not so sure of that. The child "breaking loose" from his spelling, learns to repeat the word in the shorter and easier form under which it was previously familiar to him. The deaf-mute knows no shorter or easier way of repeating the word than by spelling it on his fingers. That process seems to reduce it for him, to its simplest form, at least till he is furnished with a syllabic alphabet. [As the sight of the word suggests to the speaking child the pronunciation of the word which he repeats, instead of the spelling which it once suggested to him,—so it may to the mute suggest the idea, which being a mental thing can not be repeated, or it may suggest to him

a sign, a gesture, short, easy and simple, which he can repeat, instead of the spelling which it may once have suggested.]

The (*seemingly*) instantaneous recognition of a word, long or short, may be granted, without implying that the long word can pass through the mind, or before the mental vision, as rapidly as the short one. Certainly it does not for us. [In one sense it does, and in one sense it does not. As an image in the mind's eye, it does. As uttered, or conceived to be uttered, it does not.] And as for the deaf and dumb, I conceive that thought with them, as with us, takes, when it is carried on in words, the form suggested by the familiar phrase, "I said to myself." When we think, we say or speak to ourselves the words we would say or speak to another. Some people are said to usually think aloud, and all people, I believe, who think in words at all, speak to themselves; and of course the words pass mentally with the same succession of parts with which they would issue from the lips in speaking to others. Now, so far as those who hear and speak are concerned, this may seem a very flat truism; but it is pertinent to the present enquiry, when applied to the deaf and dumb. In speaking to others, they always either write by successive strokes, or spell by successive letters the words they use; and I apprehend they do so still when they speak to themselves, that is, think in words.

Still I am not prepared to deny the abstract possibility of overcoming this habit of going over words letter by letter. It *may be*, as you suggest, that we do not acquire the habit of reading without mentally pronouncing the words, because we can pronounce them about as fast as we are in the habit of thinking. Indeed, we know no easier or more rapid way of thinking than by words in syllables. But the deaf and dumb, accustomed to communication and thought in a language even more rapid than speech, must find this spelling letter by letter, excessively tedious. Hence, I suppose, the little pleasure most of them take in reading.

But there is another point to be considered. Words are assemblages of letters, not characters presenting any thing like unity or dependence of parts; but mere successions of

letters, for us cohering in syllables,—for the deaf and dumb, having no cohesion out of which an idea of unity can be formed. The parts of a *house*, of a *tree*, of a *book*, etc., have some natural cohesion. Each part suggests the whole. Not so the parts of a written word. Will not this fact make it, if a possibility, still a thing hardly to be looked for with minds of average powers, to regard words otherwise than as successions of letters?

And it seems to me easier to grasp and handle written words as successions of letters than as units. Letters have long been familiar things to the deaf-mute. Regarded as *units*, each new word would be a new arbitrary character. Is not it easier for a deaf-mute to commit to memory a long word in the familiar alphabet, than a much shorter one in an alphabet wholly unknown to him? A long Latin than a short Hebrew word, for instance? And if this be so, does not it show that it is easier for them to repeat mentally a few familiar letters, than to recall before the mental vision the visible forms of words as *units?*

The slowness of alphabetic words is only comparative. Where, as in the case of Laura Bridgman, the pupil had not been accustomed to a more rapid medium of thought and communication, this slowness offers no particular discouragement. And if fewer words are thus presented, that may be atoned for by a better choice of words, and a concentration of attention on each; but where the slowness is felt, impatience and discouragement may in some degree result. Still we learn by habit to be content with the best we can get.

Yet the highest rapidity of the manual alphabet, even without abridgments, is equal to that of deliberate speech. Professor I. L. Peet, of New York, it is said, can convey to his wife, almost every word of a sermon *pari passu* with its delivery; and the same, or even more, was said of the ability of the intimate friends of the deaf authoress, Charlotte Elizabeth, to communicate to her a sermon or other public discourse. The English manual alphabet was used in the latter case, and if less graceful and convenient, is not less legible and expeditious than ours.

That words under the forms of the manual alphabet can be and are used by deaf-mutes as the direct signs of ideas and instruments of thought, we know. That words in their written form are so used, may also be a fact;—but if so, is a much less common and less completely attested fact.

Thinking in a succession of images that pass through the mind as in a *camera obscura*, is doubtless, the *first* mode of thought; and it clings longer and prevails more with the deaf and dumb than with those who use speech. It may be asked, then, why a succession of written words may not pass through, or (if you prefer that expression,) *before* the mind, as well as a succession of any other visible objects? I suppose they may. But will they pass word by word, each word a *unit?* I doubt that; because, as I before remarked, the parts of the words have no natural cohesion, in fact no *unity*. One part does not of itself suggest another; but they follow each other in a customary series. Is not then this order or succession of the letters a part of the idea of the word, without which the word is no longer the same word? We recognize a *deer* in any position, even if his head should be cut off, and tied to his tail; but if we invert or transpose the letters of the word *deer*, the word is no longer recognizable. And if this order or succession of letters is essential to the idea of the word, how can we call the word before the mental view except by recalling its successive parts?

Moreover, if a long word can thus pass through the mind as a *unit*, it should be just as easy for a short sentence so to pass. Compare *hippopotamus*, or *responsibility*, with howdoyoudo, or, whereismyhat. Evidently the written word has no more unity than the written sentence, and often as many parts. There must be a practical limit to this power of grasping words as *units*.

Where is this limit? Probably most minds can grasp no more letters at once, than they can count of distinct objects at one glance. Suppose words composed of the same letter repeated ten or eleven times, e. g. bbbbbbbbbb, bbbbbbbbbbb. Can your eye, or any one's eye, tell the difference between these two combinations without careful counting? And

moreover, is not it easier to commit to memory three or four short words than one long one?

From these considerations, it appears to me that it must be one of the most difficult of intellectual feats, to have in the mental view *at once* all the letters of a long word. For a word of three or four letters or familiar parts, it may be practicable.

If then, words are nothing but arbitrary series of letters,—I conceive that the deaf and dumb, when they mentally repeat words, have the choice of three operations: 1, to spell them mentally; 2, to write them mentally, (stroke by stroke;) 3, to adopt some abbreviation which shall serve as the direct instrument of thought, but be convertible into the full word at will.

No doubt the deaf and dumb, while mentally repeating words in the finger form, have in mind an idea of their appearance on paper, just as we, in repeating words by syllables, have in mind their orthography. The manual alphabet has no equivalent for capital letters; yet the deaf and dumb are, I think, less apt than speaking children to fail to use capitals correctly in writing. This however is no aid in simplifying their conceptions of words, obviously indeed tending rather to complicate them than otherwise.

When you attribute the slowness with which deaf-mutes read, to their want of familiarity with language, (p. 237,) I rather suspect you put the cart before the horse. Your own previous remarks show that the slowness with which they are compelled to use words, [in communication with others and with their teacher, not in reading,] is the main cause why they do not become more familiar with language. You say, (p. 239,) "We could name educated deaf-mutes who, in conversation by writing, will set out on the instant without hesitation, and commence a sentence of some length, which they entirely see through to the end, before they have had time to write a word. Whereas, on the other supposition, [that they think words by following the strokes of the pen,] they would need a double time, that is, as much time to compose it, as afterwards to reproduce it." You can hardly mean here

that all the words of the sentence were present to the mind at once; I suppose the meaning is that the mind glanced with extreme rapidity along a line of words marshalled up mentally. To me, however, it seems that the case is neither more nor less than that of a speaking person beginning a sentence orally, and having a clear idea of what he is going to say before he has pronounced the first word. Does it follow that he mentally ran over the words before he spoke them? Surely not.

[The case is the same undoubtedly. But the mind must go on in advance of the voice, more or less, of course, not merely with ideas of things, but with ideas of words. If the mind of the deaf-mute works so slowly with words, as is represented, he must in writing and composing, either carry on the actual writing of one word simultaneously with the mental writing of another, which we cannot believe, or there must be some pause or hesitation exhibited; the absence of which we considered as evidence of a rapid movement of thought in composition.]

The advantage which you ascribe to written or printed words over "finger letters," in that they "stand permanently before the eye," does not seem to me by any means an advantage that will promote rapidity of thought or composition in words. This *permanence* promotes distinct conceptions, but it neither impresses the word on the memory so well as repetition by the manual alphabet, nor surely can it enable the word to move faster through the mind. Does it enable the mind to glance quicker from word to word? That is the question we have to solve.

[Does the use of the written form promote rapidity of thinking in words? It enables each "word to move faster through the mind," because a word, supposed to have been already learned and made familiar, is more quickly apprehended in that form, than as spelled on the fingers. And what can be quicker than the glance of thought from word to word presented in the written form? As to committing to memory by means of the written form without the manual alphabet, much will depend on the habits to which the pupil

is trained. We have no doubt that the more he commits to memory without the aid of the manual alphabet, the better it will be for him. Besides the habit of rapid thinking thus formed, the relation between the clauses and members of the sentence will be likely to be observed; whereas, committing to memory by the manual alphabet, is apt to be little else than a mechanical process of hooking on each word to the next.]

To sum up, it seems to me a natural process, and analagous to our own mental use of words, that deaf-mutes should think *in* or *of* words by following the movements by which they reproduce them. Thought is itself movement,—progression; and signs to be used as the instruments of thought, (not merely suggesting ideas, but carrying them along and aiding their progress,) should have movement, which implies succession of parts, not fixity or permanence. The multiplication of parts, and hence comparative slowness of movement, is an evil; but either it must be accepted, and made the best of; or means must be found to reduce the number of parts, as by the use of a syllabic alphabet, or by abbreviations.

As to your suggestion that a sign for every word, as the "accompaniment, or if need be, the exponent of the word," would aid in thinking in words, the idea, I suppose, being that the sign would supply the unity wanting in the written word, and, like the withe that binds a faggot, enable the deaf-mute to handle it faster,—that is to say, recognizing the word at a glance, instead of repeating its letters, he merely repeats the sign,—I merely observe that the *idea*, where the word or even the phrase suggests any distinct one, will serve just as well, and that the signs will, when made in the order of the words, often be a hindrance, rather than a help to the understanding of the sentence. If the attaching a distinct idea to a word does not enable the deaf-mute to dispense with the mental spelling of the word, the attaching a sign will not. And unless the sign enables him to dispense with this spelling, it only adds at least one more to the already great multiplicity of parts.

[Why! A sign is a "movement." And if it is insisted that there must be some movement, or idea of movement, to help the mind along the track of words, it may much better be a single gesture, than a tedious manual spelling. In short, it is quite conceivable that such an expedient should aid in remembering or in constructing sentences. We do not, however, think it a needful, or on the whole, a useful one.]

After all, this multiplicity of parts is not so much the obstacle to deaf-mutes thinking in written words, as the want of life, or as Mr. Jacobs would probably call it, of *vitality*. This *vitality* can only be supplied by the gestures and expression of eye and face that accompany words. And as you will fully agree with me, indeed I think have made the remark yourself, this gesture and expression easily and naturally accompany spelling with the fingers, and can scarcely be made to accompany writing. Written words must, therefore, either recall finger-spelling as the primary form of words, or seem cold and lifeless in comparison.

[Mr. Burnet has given us several reasons opposed to the idea that deaf-mutes apprehend words as units. One is, that words are made up of letters arranged in a certain order, enforced by the consideration, that there is certainly a limit of length beyond which a word can not be recognized at a glance. We admit that in recognizing, or calling to mind a word, the mind must be cognizant of the parts and the order of the parts of which the word is composed. We admit also, that there is a practical limit to the number of parts in one whole, capable of being, as we say, instantaneously apprehended. But remember, that every object of perception or of thought, is complex. Each letter is complex. A line, or a dot, is complex. We know or recognize a complex object, only as we recognize its parts and combine them into the whole. Every object of thought requires, then, several mental acts. These acts are successive. They require, therefore, some extent of time. We can not have a thought in an absolute point of time. What we call an instant, is an extent of time so brief that we can not measure it. Yet it is impossible for us to draw the limit between what we call an

instant and what we consider a measurable extent of duration, or between an apparently instantaneous act, and one which seems to occupy time and involve distinct succession. There are, then, for us no absolute units, but only what are practically such in relation to our power of applying a measure. Practically, we say, a feather does not jar the rock on which it falls; but natural philosophy teaches us, that the shock is felt through the universe of matter. We can not set a limit, and say this body will jar the rock and that will not, though we may find a considerable range within which the vibration will be imperceptible to our senses, or to any tests we can apply. So it is in respect to the complexity of thought. All thought is complex, involving acts in succession, even though not so to our consciousness. All we have to say then is, that, practically and within certain limits, we can recognize or apprehend words as units, that is, recognize or apprehend them by an instantaneous act, or what we call such, and what is practically such to us, though involving a series of successive acts. The number of objects precisely alike which we can count by a seemingly instantaneous act, will not help us, as Mr. Burnet supposes, to find these limits. We are not obliged to count the letters of a word in order to recognize it; these are two quite different processes; and we can count unlike objects more rapidly than those precisely alike.

The instantaneous recognition of a visible object, a written word for example, depends more upon a previous familiarity with the object, than upon the number of parts which compose it. Some are more easily made familiar, or committed to memory, as we call it, than others; and this depends on a variety of circumstances, important in reference to that matter, but having no relevance to the present inquiry. The confounding of the process of committing to memory, with that of thinking in, or of, a word already familiar, will lead to error; though there may be important relations between the two processes.

Another reason advanced by Mr. Burnet is, that as deaf-mutes reproduce words only by movements, therefore they

mentally go through the same movements in bringing the words before their own minds. He introduces, for argument, a play upon words, by saying that thought is movement; as if it must therefore be the thought of some bodily movement. Is not imagination, or the power of forming images of things, an active and plastic power? But can it act, only by going to work with an imaginary pencil and pallet, or chisel and mallet, or pen or crayon, or other tool in hand? In fact, this power of taking impressions from visible objects, and of reproducing and combining them at will, is a leading faculty, and capable of acting for and by itself, and of acting with rapidity and force. It can furnish instruments of thought, having "movement, which implies succession of parts, not fixity or permanence;" that is, it can present to the mind words one after another in succession. If it is not now, it ought to be brought into full play, in aid of the deaf and dumb in the acquisition and use of language. Still, the faculty is undoubtedly stronger and more predominant in some persons than in others. There is in some minds a tendency to follow movements and run along a line of events in succession, rather than to picture objects in space. Minds differently constituted will seek different aids for their thinking processes.

We desire not to be understood as admitting that the majority of our pupils do become confirmed in the habit of thinking in words, under the form of the manual alphabet, so as to find it a difficult habit to overcome. Observation, as well as theory, leads us to the opinion that it is not so, and certainly that it need not be so. Of course, something depends upon the training.]

OBITUARY NOTICE OF GEORGE E. KETCHAM.

BY REV. THOMAS GALLAUDET,

Rector of St. Ann's Church for Deaf Mutes, New York.

George Erastus Ketcham was the oldest child of Mr. and Mrs. John W. Ketcham. He was born in the city of New York, January 7th, 1829. His parents did not discover that he was a deaf-mute, until he was over two years old. During the tender period of childhood, he was remarkable for gentleness and sincerity. At the age of nine or ten, he was very ill, and lay for several days at the point of death. Having attracted the attention of his mother, who was anxiously watching at his bed-side, he tried to make her understand by his signs that he wanted something in another part of the room. Being desirous of gratifying him, she brought to him various articles in succession, but all to no purpose. She could not find out what it was upon which he had so set his heart. The next morning, renewing her attempts to get the right thing, she at length brought to him the copy of the Bible which was in general family use. The expression upon his countenance showed that this was the longed for object. He placed the Bible upon his bosom, folded his little arms over it, and went quietly to sleep. His keen powers of observation had taught him that, among his loved ones, this book was held in great esteem, and in his hour of peril he wanted it near him. Though he was of course ignorant at that time of the great truths of this blessed volume, yet this touching incident proved indeed the key-note to his subsequent life, for as soon as education shed her light upon his imprisoned mind, and gradually unfolded to him the momentous doctrines of revelation, we find him ever embracing them with his heart.

Our departed friend and co-laborer entered the New York Institution for the Deaf and Dumb in his eleventh year. He graduated in July 1847 and left in 1848. During most of his course, he was under the instruction of the late Rev. J. Addison Cary, by whom he was greatly esteemed, though his teacher was not the only one who appreciated his sterling

good qualities. He was a general favorite with officers and pupils, for there was a bright and genial manliness about him which charmed the hearts of all his associates. His whole bearing was that of one who loved to do right. He established such a character of moral and intellectual excellence, that Dr. Peet, the President of the Institution, could cordially recommend him as fitted to discharge the duties of an instructor of deaf-mutes, in the Institution which had recently been started in Raleigh, N. C. Having received his appointment from the Board of Directors of this Institution, he bade farewell to home and kindred, and went cheerfully and hopefully to the distant post which Providence had assigned him. This was in July, 1848. Here he labored faithfully for ten years, going on towards perfection in the Christian pathway. The letters and resolutions appended to this sketch are a grateful tribute to his memory, setting forth the estimate which was formed of him by those who knew him best. In all the relations of life, he evidently impressed others with his genuine integrity and sincerity. It was certainly quite remarkable that he, being a deaf-mute, should have been led to join a military corps. But, notwithstanding all the disadvantages of his position, his natural quickness of apprehension and bodily activity, enabled him to stand shoulder to shoulder with his comrades, for he is described as an "ornament" of the corps.

Mr. Ketcham was confirmed in 1853, and became a communicant of Christ Church, Raleigh, under the pastoral care of the Rev. R. S. Mason, D. D. In July 1858, he resigned his connection with the Institution on account of ill health, and returned home to his parents in New York. His complaint proved to be the consumption. It was hoped, for a time, that medical skill and maternal nursing had checked the ravages of disease, and that he might be continued through the winter till another spring-time should bring its invigorating influences. When the writer saw him last September, for the first time after his return from the South, he seemed in the enjoyment of a tolerable degree of health. True to his kind and obliging nature, he was guiding a

small company of pupils from the Institution for the Deaf and Dumb, around the House of Refuge, of which his father has been for so long the respected Warden. He greeted me with a warm welcome, and we had a very pleasant conversation. A few weeks passed away, and I was summoned to his sick room. A great change had taken place in his bodily appearance. He had become thin and weak. But his mind was clear and composed. Death had no terrors for him. It was refreshing to witness the devout and intrepid bearing of this youthful soldier of the great Captain of our salvation. Older christians might have learned of him. Prayer in the sign language was offered, and a time appointed for him to receive the communion. He desired to be transferred from Christ Church, Raleigh, and to be received as a member of our Parish. In compliance with his wishes, I addressed a note to the Rev. Dr. Mason, the reply to which is given below. Our friend sank so rapidly that he was unable to receive the communion, and Dr. Mason's note, it will be perceived, was dated two days after his death. It was evident to all who stood in tears around this dying Christian, that the valley so dark to the natural man, was irradiated to the spirit's gaze with celestial light, and that the Good Shepherd's angels were conducting another of the redeemed to Abraham's bosom. On the 10th of November, 1858, George E. Ketcham was gathered to his fathers. His parents mourned the departure of an obedient, faithful son; sisters and brother wept as they thought that they should experience no more his kind and gentle attentions; friends grieved that one promising so well for an honorable and useful life had thus been stricken down in the morning of his days; but all were comforted with the reflection that for Christ's sake he had entered upon the glories and bliss of Paradise. What a comfort to the bereaved to find marked in his Bible such texts as the following: Psalms viii, 9; xviii, 28; xix, 7; xxxii, 1; Romans v, 2; Hebrews iv, 16! The funeral services were held on Saturday, Nov. 13, at the House of Refuge and the Methodist Church in Harlem. At the latter place there were present quite a large number of pupils from the Institution, under the charge of

Prof. I. L. Peet, desirous of honoring the memory of one who had reflected so much honor upon their *alma mater.* The service and address were translated into the sign-language. The body having been placed temporarily in a vault by the church, has since been committed as "dust to dust," in the family burial plot at Northport, Long Island, there to await the resurrection of the last day.

Thus has been taken from our profession a true man, one who tried to do his duty in that state of life to which it had pleased God to call him. He leaves an example for us all to imitate.

Letter from R. S. Mason, D. D.

RALEIGH, Nov. 12, 1858.

DEAR SIR:—I received this morning your letter of the 10th, and very willingly comply with the request contained in it. I had heard of Mr. Ketcham's illness, and indeed it was here announced that he had died. Be pleased to convey to him my assurances of continued regard, of my sincere sympathy for him in his bodily distress, and of my prayers that the good God will grant for His Son Jesus Christ's sake, that "peace which passeth understanding," "that joy which is unspeakable and full of glory." He was very much esteemed in this place. He was confirmed and received his first communion in this parish, and has always, as far as I know and believe, led a godly and Christian life.

Very truly, Your brother in Christ,

R. S. MASON.

REV. THOS. GALLAUDET.

Resolutions by the High Class of the N. Y. Institution.

On the thirteenth of November 1858, a meeting of the members of the High Class of the New York Institution for the Deaf and Dumb, was called to order, and organized by the appointment of Gilbert Hicks, Chairman, Charles K. W. Strong, Secretary.

The following preamble and resolutions were then unanimously adopted.

Whereas, It has pleased Almighty God to remove by death Mr. George E. Ketcham, a resident of Raleigh, N. C., well known both as a distinguished graduate of the New York Institution for the Deaf and Dumb, and a competent and faithful instructor in the North Carolina Institution for the Deaf and Dumb. Therefore,

Resolved, That while we would humbly acquiesce in the divine will, we do hereby express a sense of personal bereavement in the mournful event.

Resolved, That we would express to the bereaved and afflicted family and relatives, our heartfelt sympathy in their deep sorrow and distress, and the assurance of our prayers to God for them, for divine grace and consolation.

Resolved, That a copy of these resolutions be printed in the American Annals of the Deaf and Dumb, and that a copy of them be sent by the Secretary, to the family of John W. Ketcham, Esquire. The meeting adjourned, *sine die*.

Letter from the Principal, and Resolutions by the Board, of the N. C. Institution.

Institution for the Deaf and Dumb and the Blind,
Raleigh, N. C., Nov. 22nd, 1858.

My Dear Sir:—We heard a few days ago, of the death of your son, and our esteemed friend.

From the time he first came to our Institution, to the time he left it, I have felt a very strong interest in him, and I now desire to express to you and his friends, the high estimation I have uniformly had of him. An intimate acquaintance with him, of ten years, has given me a good opportunity to judge of his worth.

It affords me pleasure to communicate to you the following resolutions passed unanimously by our Board of Directors, at a meeting held on Saturday evening last. With kind regards to your family, and sincere sympathy in their affliction, I am truly Yours, W. D. Cooke.

"*Resolved*, That this Board have heard with sincere regret of the death of Mr. George E. Ketcham, who for ten years was a teacher in this Institution.

Resolved, That in the death of Mr. Ketcham, this Institution has lost an excellent and efficient teacher, and the Board desire to express the high estimation in which he was held by them, as a teacher, a gentleman and a Christian, and to tender to his parents and friends their sympathy for this bereavement.

Resolved, That these resolutions be entered on the minutes of the Board, and published in the papers of the City; and also that a copy be sent to the father of the deceased."

WM. D. COOKE, *Secretary of Board.*

Resolutions by the Oak City Guards.

ARMORY, OAK CITY GUARDS.

RALEIGH, N. C., Nov. 20, 1858.

Whereas, by a dispensation of Divine Providence, our beloved friend and late companion in arms, George E. Ketcham, has been removed from this world to a blessed state of Eternity.

Therefore, be it Resolved, that while we desire to avoid any public manifestation of grief, or showy expression of sorrow, we tender to the bereaved friends of the lamented deceased, our warmest assurances of consolation in their sore affliction, and unite with them in dropping a tear to the memory of one who was an ornament to our corps, and a friend to every man who composed it.

Resolved, that this company wear on their left arms the usual badge of mourning, in respect to his memory, for thirty days.

Resolved, that a copy of these resolutions be sent to the family of the deceased.

WM. E. ANDERSON,
J. W. WIGGINS,
JOSEPH JONES,
WM. H. WILLIAMS,
} *Committee.*

A BIRTHDAY FESTIVAL.

Happening, after a long absence, to be a visitor at the New York Institution for the Deaf and Dumb, I was honored with an invitation to the High (Class) Festival, got up by the class, (by a *conspiracy*, as Prof. Peet remarked he would have called it, were that word used in a good sense,) in honor of their worthy teacher's birthday. I felt desirous to preserve a sketch of this "green spot in memory's waste," and to cull some crumbs from the intellectual feast for the delectation of the readers of the Annals; but getting hold of the annexed account, written by one of the members of the class, I concluded that I would not try "to paint the lily, or throw a perfume on the violet;" certainly the credit which is reflected on the class by the tasteful manner in which they got up the festival, is not a little increased by the ability with which one of their number has described it. J. R. Burnet.

At ten o'clock on Saturday evening, December 4th, 1858, the gentlemen and ladies of the High Class, with several guests were escorted to the dining-hall, under the direction of Sidney J. Vail, Marshal, and sat down to a luxurious repast, which had been got up by previous arrangement, in honor of the birthday of their beloved Professor, Isaac Lewis Peet. The class, which consists of both sexes, had a very bright appearance, especially the ladies, who wore beautiful wreaths of natural verdure. The table, which was beautifully decorated and bountifully supplied with all manner of good things, was highly creditable to the matron and the ladies who took part in its preparation.

By invitation of the Marshal, a blessing was invoked in the sign language by Harvey P. Peet, LL. D., the President of the Institution. Albert A. Barnes, the Orator of the Day, and a senior member of the High Class then rose up, and in the name and in the behalf of the class, delivered an appropriate address, and then presented a beautiful cup and saucer to Prof. Isaac L. Peet, A. M., by the hands of his beautiful

lady. The applause at the conclusion of this address, was long and loud.

The address in a written form, and signed by all the members of the class, was then laid before Prof. Peet. It is as follows:

Prof. Isaac L. Peet,

We, your pupils, wishing to testify our gratitude to you, and show that we have not forgotten the anniversary of the day which gave to us a teacher, and to the deaf and dumb of America, a great benefactor, have, by a unanimous resolution, adopted this method of expressing it. Daily, for years, you have set before us an intellectual feast, the viands of which were richer than those which pleased the fastidious palate of Vitellius, for they were selected from the choicest gardens of ancient and modern literature, or better still, the native product of your own prolific mind, and as you devote your time to the nourishment of our souls, and the cultivation and gratification of our intellectual tastes, you will permit us, for once, to minister to the wants and the gratification of your body. It is the last time that many of us will be permitted to congratulate you on the return of this joyous day, and personally express the hope that each succeeding year may be happier than the last until you have completed your sojourn on the earth. Though, when your next birthday arrives, many of those who are now gathered around you, will, if their lives are spared, be in their far distant homes, it will not be forgotten. It will ever be a day in which we shall pause in the toil and strife of the great world, of which we now know so little, to strengthen our minds and hearts, by living over again, in retrospection, the many years of almost unalloyed happiness we have spent under your faithful guidance, and not only then, but every day, our prayer that God's choicest blessings may ever rest upon you, will ascend from the deepest recesses of our hearts. Had we the power, we would bring you the goblet of Bacchus brimming with the nectar of Jupiter, and summon Venus for your cup-bearer, but as this is impracticable, we trust that you will be lenient enough to take the "will for the deed"

and accept the infusion of the far-famed berry of "Arabia the blest," which we have the honor of presenting you, from the hand of one much more dear to you than Venus was to Jupiter, and though the cup which contains it will, in a few years, have crumbled back to the clay of which it was formed, may we hope that you will sometimes think of those who gave it, until the golden bowl is broken and you are seated with those who partake of the feast of everlasting life in the mansion of the blest.

Albert A. Barnes,
Charles K. W. Strong,
William W. Farnum,
Gilbert Hicks,
Sidney J. Vail,
John Witschief,
Melville D. Bartlett,
Harley W. Nutting,
Elias Perkins,
Edward E. Miles,
Annie E. Thorn,
Gertrude Walter,
Amelia A. Noyes,
Fanny Smith,
Sarah J. Christy,
Emily Thorne,
Sarah A. Eastman,
Eliza J. Montgomery,
Dorothy Vosseller,
Elizabeth Cook,
Rhoda A. Wells,
Alice McCormick.

Professor Isaac L. Peet, in reply, extended his warm thanks to the class for the present tendered by them, and spoke of keeping it always as a token of remembrance. He expressed himself as much surprised as gratified with this evidence of the affection entertained for him by the class, and said that it would encourage him to yet more earnest efforts for their advancement.

The *eatables* then began to disappear, and the wants of the body being satisfied, the marshal, Sidney J. Vail, called for toasts.

Charles K. W. Strong, a senior member, being called on, rose up and gave as a toast: "The chief professor of our Alma Mater. May he be blessed with long life and excellent health; that priceless boon secured to him, gives to us an unequalled instructor of literature and science." (Cheers.)

Prof. Peet rose up and responded in a few happy remarks, and concluded by proposing "The health of John H. Roche

and G. W. Schutt, the only absent members. May this boon, of which by the permission of providence, they have been temporarily deprived, be speedily and fully restored to them, so that they may be enabled to resume their studies with a prospect of success." (Cheers.)

Dr. H. P. Peet being called on, made some interesting remarks in relation to the history of his son's early childhood, and expressed the hope that the future of the class would be full of even better promise than before, and that they would appreciate the social and religious advantages they enjoyed. He manifested great interest in their welfare. (Loud applause and cheers.)

Mr. John R. Burnet, of Livingston, N. J., a deaf-mute gentleman of learning, being called on, rose and said he remembered when Mr. I. L. Peet was so small a boy that he, Mr. Burnet, had to lift him up, which he could do with ease, to look at a map. That time was long past, but remembering how good and studious a boy he was, Mr. Burnet was not surprised that he had become so good, learned and useful a man. He gave as his sentiment; "May he long live and long continue to be useful, for in usefulness his noble nature will find happiness." (Loud cheers.)

William W. Farnum, a senior member, was disposed to be somewhat facetious, in the expression of his kind wishes. "The ladies of the High Class. May the beauty of their character expand in the graceful and admirable proportions of their hoops." (Cheers.)

Charles K. W. Strong rose again and gave "The health of the Class of 1859," a sentiment which was honored by a general rising.

Prof. Peet again proposed as a sentiment, "Behold, how good and how pleasant it is for brethren to dwell together in unity!"

Sidney J. Vail told the class that it would gratify him to toast them, but he found it quite impossible to collect his thoughts for that purpose, as he knew they were not fond of "dry toast," and whatever he could give, would be so dry that it could not be moistened by all the coffee in the urn.

A number of toasts and speeches followed, and the festival closed with a benediction by Prof. Peet, and then the guests and members went to the parlor to finish the evening in social conversation.

It was really most pleasant to see the joy that beamed from all their faces, and the animation and grace with which they expressed their ideas in the beautiful language of signs.

NEW ENGLAND GALLAUDET ASSOCIATION OF DEAF-MUTES.

The following correspondence explains itself. The munificent gift of Mr. Salisbury, will be valued by the deaf-mutes, more especially, as an evidence of the interest with which their efforts at self-improvement are regarded by a person of his standing and character, as they must be by all the intelligent and benevolent portion of the community.

WORCESTER, MASS., Sept. 22, 1858.

CHARLES BARRETT, ESQ.,

Treasurer of the New England Gallaudet Association.

MY DEAR SIR:—The recent meeting of your Association in this city must have been as gratifying to the members as it was interesting to others. Such public exhibitions of culture, good sense and capacity for business, will give to Deaf-mutes the self-reliance which is essential to a useful and happy life, while the community is made more willing to sustain their schools and to aid the difficult and honorable efforts of individuals to rise above the embarrassments of their lot.

I think many spectators will have carried away from your sessions the conviction, which rested on my mind, that such a worthy organization ought not to be permitted to want the means of efficient action. As a token of my sincere good will and of my respect, I offer the enclosed donation, ($100,) to the funds of the New England Gallaudet Association. I remain, very respectfully, Your obedient servant,

STEPHEN SALISBURY.

Boston, Mass., Sept. 24, 1858.

Hon. Stephen Salisbury.

Dear Sir:—I have your letter of the 22nd inst., before me, enclosing a check for one hundred dollars, as a donation to the fund of the New England Gallaudet Association of Deaf-Mutes. It becomes me, as its treasurer, to acknowledge its receipt, and, in its behalf, also gratefully to accept the gift.

The recent meeting at Worcester, to which you are pleased to allude in such pleasant terms, was gratifying to the members; more so, indeed, than any previous meeting of ours had been. And Worcester was judiciously selected as the place of meeting. We separated with the liveliest feelings of gratitude towards her citizens, for the kind interest they manifested in our behalf; for their hospitality, and for their benevolence, as shown by the liberal donations, that have already come from two of her citizens. Rest assured, Sir, that all this will be long remembered by the members of the New England Gallaudet Association. Accept the best wishes of myself and the Association, for your present and future welfare. I have the honor to be, very respectfully, your obedient servant, Charles Barrett.

The following item was omitted in the report of the Worcester Convention.

PRESENTATION.

On Wednesday evening, Sept. 6, while the parlors of the Lincoln House were filled with deaf-mutes and their friends, Mr. Wm. Martin Chamberlain, in behalf of a number of friends, presented to Mr. Thomas Brown, the President of the Association, a sum of money, with which it was the desire of the donors, that he would furnish himself with a pair of *gold spectacles*, as a token of their regard and esteem for him, both as a friend and as an officer. It was their wish that he might live long to enjoy them.

Mr. Brown, who was taken by surprise, replied substantially as follows:—"I hardly know how to express myself; I accept this substantial token of your esteem with a deep

feeling of gratitude, and an appreciating sense of the honor conferred upon me. I shall always remember the many pleasant hours we have spent together, and the many ways in which you have shown your friendship for me. If I should hereafter see my way through life any clearer than before, I shall attribute it, under Providence, to your kindness."

It is hardly necessary to add, that on the following morning, Mr. Brown's friends had the pleasure of seeing his smiling face ornamented with their present.

Charles Barrett, Treasurer, in account with the New England Gallaudet Association.

Dr.—Oct. 20, 1857, to Jan. 18, 1859.

Balance on hand at last account, - - -	56.91
Cash received from members, - - - -	106.50
" Donation at Worcester, - - - -	20.00
" " from Hon. Stephen Salisbury, -	100.00
" received for honeysuckles, donation of John Emerson, - - -	16.08
" received as interest, - - - -	12.18
	$311.67

Cr.—Oct. 20, 1857, to Jan. 18, 1859.

Express charges, paper, postage and printing. -	9.09
Bills paid and incidental expenses at Worcester, -	51.28
Paid American Annals, (1858,) - - - -	48.00
Balance on hand, - - - - - - -	203.30
EE.	$311.67

Charles Barrett, *Treasurer.*

Boston, Jan. 18, 1859.

Boston, Jan. 19, 1859.

This certifies that I have examined the above account, and find it properly vouched. Samuel Rowe, *Auditor.*

ERRATUM.—In the report of the business meeting of the Worcester Convention, (see Annals, Oct. 1858,) George Homer is said to have been nominated for *Vice* President, and declined. It should read, he was nominated for President.

MR. SWETT AND HIS DIORAMA,—ADDRESS BY MR. SWETT.

[We gave a notice in the last Annals, of the miniature Battle of Lexington, constructed by Mr. William B. Swett, a former pupil of the American Asylum. Mr. Swett came to Hartford, and exhibited his work to the pupils and teachers of the Asylum, on Christmas day, and at the same time delivered an *Address*, which he had previously committed to writing. We insert it here, not merely for the gratification of his friends and fellow mutes; the frank simplicity with which he has laid open his experience, give it a peculiar interest for every reader.

Mr. Swett disposed of his work, while in Hartford, to Messrs. Goodwin & Co., proprietors of an attractive and popular show, which comprises a number of pieces of a similar description. He at the same time engaged his personal services in their employ, on terms advantageous to him.

Mr. Swett was born deaf of one ear, and perhaps partially with the other. He lost hearing entirely at ten years of age, by the measles and mumps. His mother, also a deaf-mute, is a sister of Mr. Thomas Brown, President of the New England Gallaudet Association of Deaf-Mutes, and he has several other deaf-mute relatives.

The intelligent readers of Mr. Swett's story, will be impressed with the importance of providing thorough instruction in the elementary principles of mechanics for pupils of a natural bent and capacity like his.—EDITOR.]

Ladies and Gentlemen, the Officers and Teachers, and the Pupils of the American Asylum :—

I CONFESS, I am totally incapable of saying what the expressions of my heart are while I stand before you. I must leave you to imagine one's feelings after a long absence, to find himself back again here on this place he has so often trod in his school days; everything is brought back to his mind, the school exercises, religious services, &c., &c. I can

not but say, that I offer up my heartfelt gratitude to our Heavenly Father for his great kindness in keeping me alive, and in his kind care of my life's journeying, and at last bringing me safe to this place I so long desired to see, and to feel again all its blessings I bore when I was a school-boy; for even now I retain all those boyish feelings, and I still yearn to become a pupil again and commence with the A, B, C. Oh! let me again be under the rule of the teachers; let me sit in the same room that I used to, and study my lessons again; let me sit at the same table and eat my meals, and let me again sit in this dear chapel, where I may drink much of that religious teaching again, which I so often attended in my school days. All would have been forever darkness with me, but for the kind care of Providence, by which this Institution sprung up as if by miracle, and thousands of minds were enlightened, and thousands know their God. Allow me to say, that I owe all the education I got, and all the success I met with since I left Hartford, to the beneficent Institution itself, and to your (the teachers') kind care and exertions and your teachings. I have now returned with pride, to show the fruits of it.

You now ask, when it originated in my mind to make this diorama, the Battle of Lexington? I will now proceed to give you all the information I am capable of remembering. Once on a time, I can not remember precisely, but should think it was about the middle of my term at school, the pupils and myself were invited to see the diorama of the Battle of Bunker Hill at the City Hall. Time never can erase it out of my mind, on seeing the first scene, how I was startled and enraptured, and would not turn away my eyes from the moving figures, and I wondered if they had souls, until the performance was through. When, on leaving the Hall, and while on our way back to the Asylum, Mr. Turner came up to where I was walking alone, separate from the boys; he put his hand on my arm, and I could see by moon-light, with a smile, and asked me how I liked the exhibition; and what answer I gave I do not remember, but I am sure I made some remark which appeared to please him, and ever after he

said nothing about it, nor did I attempt to say about it to him again. I tried to forget the beautiful thing, but could not, and have spent many restless days and sleepless nights. I dreamed of it while in bed, amused my mind in various ways by day. I do not exactly remember what the nature of the show was. I feebly tried to find out. I found I was too young, and destitute of inventive genius, as I have now in my older age. I have often told the boys that when I am older, I meant to make a diorama, but all the answers they gave me were none of the pleasantest. They believed a deaf and dumb person would never be able to make one, nor succeed in taking an exhibition journey. I determined to surprise them some way, if there was any chance, which I happily had on a Christmas day. It had been customary with them to decorate their sitting room with evergreen, pictures, and any thing they could find at their wit's end, and for my part I was too lazy to do any thing, and at the same time, I unconsciously kicked up a quarrel with one of the boys, when I forgot I had a beam in my eye, for I accused him of his want of interest in helping the boys. It proved a good lesson to me, and I got worsted by him. As if by magic, I forgot the quarrel, ran to the city, got some colored papers, and by the assistanee of an old pupil I succeeded to a charm in making and arranging soldiers; I borrowed war-horse with an officer on, I made a cannon, I set it on the west shelf in the sitting room. Christmas evening came. The teachers came, next the ladies and girls, and at the head was the venerable Mr. Weld, to enjoy the sight of the decoration the boys had made. I can never forget, Mr. Weld, with a look which appeared like surprise, walked quietly up to the shelf, while I stood near by with both of my hands in my pockets; he surveyed the work with his piercing eyes so natural with him, he turned round slowly full before me, and with his face lightened up with pleasure, asked me who made those pretty soldiers, &c., pointing at them with his straight fingers. I told him it was I. Some of the teachers followed him round, and at this instant I got myself out of their presence ; my heart beat with delight at

the success; I learned to think possibly I could succeed in any work if I should try. Though very trifling as you suppose, yet it led me deep into thought for many years, and here is the effect of this memorable event. I learned two words, patience and perseverance. When I lay hold of any thing, I go to work with a will and overcome all difficulties if I meet them. You are welcome to make good use of this example in your work toward the pupils; they will follow your advice and my example to good effect during their lives after they leave the Institution.

You would ask, why was I willing to devote so much time on the Battle, when I ought to have attended to other things more necessary? If I am to say all the particulars which induced me to pursue the work, it would tire you to hear at present, but I will give you a few reasons and make the story short. I was born to be an inventor, or so I thought I was. I have been a great whittler, a curious and amusing business from the age 24 years old to my present age. You are welcome to laugh to your heart's content, but I turned it to good account. I loved all kind of machinery, and often felt gloomy and sick they were not of my own invention, nor could I invent any. I have studied natural philosophy, and many things, but I was not content with it. I wished I had been thrown into a good field, where I could make myself the most useful to my friends and the deaf-mutes in general. I wanted to have a good privilege to improve my mind with writing language, &c., &c. I thought by going on a journey with a show there may be a fine time to go to learning again and to great advantage, by conversing with persons, who have any interest with me. Very happily I had it to my heart's content, and hope I may continue to enjoy it a long time. I have been very fond of military music and seeing parade, ever since I was four years of age. I commenced to practice on the drum at five years old, with a tin pan and a stick. I thought to myself, before I lost my hearing, when I grow up to be a fine soldier, I will handle the musket, or brandish the sword, ride on a horse, a plume in my hat and epaulettes on my shoulder, &c., &c. Often I would get a long stick,

tie a string on one end for a bridle, and vault on it with pride, and gallop away with a wooden sword to my side and a cock's feather in my hat; but I was checked in my youthful career by being deprived of my hearing, and to this day I have a longing to follow the army. I had a brother who went but never returned. He was wounded at the storming of the castle of Chepultepec, and died from a wound. I tried hard to get the consent of Gen. Pierce to accompany my brother to the war, but the laws of the United States forbid deaf-mutes enlisting for the army. At the age of twenty-five, I determined to settle down. I married and settled down in my native town. I worked diligently at my trade, and after eight years of experience, I found the competition in the carpenters' business so great, I being a mute, I found it hard work to support a family. I have been much hindered in all kinds of work by sickness, and the expense more than I could get by steady work, &c. I hoped, if I could take a journey with the exhibition, I might be able to make myself and family independent and comfortable.

All the success I met with on this work, is owing much to my wife's encouragement and kind advice. She would lessen or drive away any gloomy thoughts that I was always apt to bear, and she would bear all the troubles with me with great patience, and I confess I have been more than once morose and cross to her in the day of trouble, but thank her for her kind look. When I succeeded, after a long time, in finding out a method I could work the figures, how her eyes brightened up! and she foresaw I might eventually succeed in the show business, and she often and alone of all my friends urged me along, showing pictures of future happiness and comfort to us all, put to silence so much malicious stories against us; God bless her, and let her be forever an ornament and a precious jewel to me, a brute of a man, and may she always by her kindness and gentleness, lead me along to prosperity.

Again you will ask, where I began to plan and work on this Battle. It was in Nashua, to which place I moved and got work in a door-factory. Not long after, one day, I went

to work gloomily, for I had met with a disappointment. At last, a show-bill was handed to me, and on glancing at a word, I was thunderstruck to find that the very Battle of Bunker Hill I loved to think of and doated on, was to be exhibited on the following evening, at the City Hall. My apron was off instantly, for how could I hold myself at such unexpected news. I asked leave of absence, ran home, swallowed up my supper, for I could not eat it from great excitement, and before I knew where I was, I found myself the first at the Hall, begged admission; the proprietor kindly gave me a free pass. I must leave you to finish the story how I enjoyed it. I commenced right away the same evening. I did not sleep a wink until the morning sun admonished me to go to work at the shop. First, I set myself to learning to make figures with a knife, and then to study the history of the Revolution. There was a gigantic obstacle to overcome. I was undismayed, but sometimes I gave the work up in despair, and would have destroyed my plan and some of the works I had begun, but for my wife; she prevented my rash act. I fixed on Lexington, because I know it was the *first* place where the first blood was shed during the Revolutionary War, that rendered this country forever free from the yoke of Great Britain, and that I hoped it would be more attractive and interesting than any thing that I knew of. Before I had proceeded far into the work, I was compelled to remove back to my native place, by ill health and other circumstances. I have done this work, generally in evenings, and every spare moment when I was not engaged, and sometimes I would work on one particular thing all night, for fear what I found out would slip out of my memory. It will not be necessary for me to say any more than that I at last succeeded, after six long years of fear and doubts.

It is well for me to say, that before I began on this work, I had invented several things, such as doctor's pocket scales, a key and lock, an artificial water-fall, and two others; but they proved nearly all failures, except the scales, which I would have entered in the Patent Office, but I had no means

to pay for a *caveat.* I have been, and am now, trying on a perpetual rocking, though I hardly know if I can succeed. I have borne the laughs of my neighbors patiently, and now if I had failed to make my friends take notice of this last invention, I wonder if I could have borne the disappointment again, but thank God I triumphed. I felt very gloomy, and made up my mind I was the most unfortunate man in the world. But not so with my wife. I first performed to her and my brother alone, and then to a few friends, who were delighted to see it, and advised me to make it public. I followed their advice, advertised a grand show to come off on a certain evening. The effect of such announcement from a deaf-mute, among my friends, can better be imagined than described. The hall was full, and I need not say what they said of it; they assured me of a perfect success by cheerings. After the performance, I ran home, I capered for joy, my wife laughed, I caught her, hugged and kissed her, our old puss flew away, my children were astonished, and what more can I say now.

Here let me introduce this gentleman, Mr. James Winston, who deserves your esteem, and of all the deaf-mutes also, as a worthy and useful man. He came nine miles and volunteered to open the first exhibition. His kind offer I gladly accepted, and I can never have cause to be sorry I have allowed him to accompany me on my tour of exhibition. I hardly know on whom I can rely so well for honesty and interest in my behalf.

How I went to Lexington to make a survey, is too well known to you. I reached home at midnight with ears frozen; my wife was up waiting for me. She had kept up a roaring fire; how I devoured my supper you had better guess.

I came here with this Battle, for I have been very impatient to show it to my dear teachers, and the pupils, and hope it will be the means of producing a beneficial effect on their despairing minds. They will learn to struggle against obstacles, and go to work with a will. I must stop and thank you all for your kind attention and your presence. I must

say, the whole work needs to be repainted and altered, and all the other fixings done up nicely. I am unable to do it at present, but I hope I may be able to, and hope you and all my friends will give me encouragement and assistance. I have a plan which I intend to accomplish at no distant day, to render the exhibition doubly interesting. When I take leave of you all, I pray you will remember me, and I will be thankful to you all my life.

NOTICES OF INSTITUTIONS FOR THE DEAF AND DUMB.

BY THE EDITOR.

OHIO.

The thirty-second Annual Report (for 1858) of the Ohio Institution, embraces, as usual, a report of the Board of Trustees, by their Secretary, to the Governor of the State, and a report from the Superintendent, and one from the Physician, addressed to the Board.

The Superintendent is Rev. C. Stone, who was assisted by eight Instructors, three of them deaf-mutes. The number of pupils at the close of the year was *one hundred and fifty*, which is all that the present buildings will accommodate, but "less than one-half the number of deaf-mute children in the State, who should at the present time be enjoying the benefits of education." Of these, the males were 84, and the females, 66. The reports from each department, urge anew the importance of larger and better buildings, and of the means of teaching trades. On the subject of trades, the remarks of the Superintendent are full and thorough, and are substantially the same as were presented by him in the report on this subject, made to the late Convention at Jacksonville.

The health of the inmates during the year was unusually good. The total receipts were $21,686.38. Expenses, $21,432.23. An appendix contains a table of the trades taught in the different Institutions in the United States.

MICHIGAN.

The annual Report of the Michigan Asylum for the Deaf and Dumb and the Blind, for the year 1858, embraces a report from the Trustees to the Legislature of the State, one from the building commissioner, and the report of the Superintendent, Rev. B. M. Fay. An appendix gives the proceedings on the occasion of the laying of the corner-stone of the main edifice in July, 1857, of which an account was given at that time in the *Annals.*

The Superintendent is assisted by three teachers in the mute department, Mr. William L. Breg, a deaf-mute, Miss Bella H. Ransom, a lady who lost her hearing after having acquired an education, and Mr. Jacob L. Green, recently employed, who had been a student of the State University.

The whole number of pupils since date of the previous report, was 74 deaf and dumb, and 37 blind, or 111 in all; though 90 is the largest number at any one time. Good health had been enjoyed. Much inconvenience was felt for want of room. The walls of the main building and the connecting wings and the roof were nearly completed. The legislature is desired to make provision for finishing the whole within the coming two years. The amount expended during the last two years on the building and for current expenses, was $75,174.53.

The Superintendent offers some just remarks upon the importance of having thoroughly educated and capable men for the instruction of the deaf and dumb. He also deprecates the dishonorable practice which deaf-mutes sometimes take up, of wandering about and getting a living by imposing upon public sympathy. He mentions one or two instances in which relatives of deaf-mute girls, prepared little books for sale, professing to give their history, and then being allowed to travel back and forth in the rail-cars free of expense, have by this means acquired considerable sums of money. We are happy to say that the general sentiment among educated mutes, leads them heartily to despise all such modes of begging, and to take an honest pride in sup-

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REVIEW OF THE ARGUMENTS OF MR. JACOBS ON METHODICAL SIGNS.

BY HARVEY P. PEET, LL. D.,

President of the New York Institution for the Deaf and Dumb.

Mr. Jacobs, having announced that the discussion on the relation of signs to words, and the comparative advantages of colloquial and methodical signs in the instruction of the deaf and dumb, is closed, *on his part*, we will, because it appears to us that his last article has rather obscured than elucidated the points in dispute, before finally leaving the subject, *on our part* briefly sum up the positions and reasons for them on both sides. Let the whole question be fairly and clearly presented, and we shall be content to let every reader decide it for himself. In stating Mr. Jacobs' side of the case, we shall use his own words; and shall endeavor, as far as we are able, to state his views fairly, and in a favorable light.

The use of *signs*, (limiting that word here to the sense of *gestures*,) in the instruction of the deaf and dumb, is *almost* a necessity. It is true, (though some teachers at the Jacksonville convention appeared to doubt it,) that a deaf-mute may be taught, as Dr. Howe taught Laura Bridgman, or

M. Recoing taught his son,* without using signs more than they are used in the ordinary intercourse of people who hear. But this is a slow process, and in particular, ill adapted to the case of a whole class of deaf-mutes. In an institution, it would be to the last degree preposterous for a teacher to undertake to teach without using, for the explanation of the written language he would teach, that language of gestures which his pupils use among themselves, and *will* use, in spite of any efforts to prevent it. Still, he may use this pantomimic language too much, so as to neglect one of the most effective means of impressing the verbal language he would teach on the pupil's memory,—its actual use, especially in the daily concerns and domestic relations of life.

There is, we believe, a perfect agreement between Mr. Jacobs and ourself, as indeed among nearly all teachers of deaf-mutes, the world over, as to the advantage of using signs for the moral and mental development of the pupil, for religious instruction, for explaining words and phrases, and as a test of comprehension; and Mr. Jacobs even coincides with what we believe is an all but universal opinion, that for most if not all the purposes just indicated, the signs used should be those which our pupils use among themselves; i. e., *natural* or *colloquial* signs.

This being premised, we state the difference between Mr. Jacobs and the majority of his professional brethren, whose views we undertake to set forth, as two-fold; a difference in a fundamental point of theory, and, as influenced by that, a difference in practice.

The difference in theory, we will state in Mr. Jacobs' own words. In the preface to a volume of exercises published by him some twenty-five years ago, he says of written words, (i. e., visible alphabetic characters for words,) "they can only become the signs of signs,—to us the signs of words, to the deaf and dumb, the signs of gestures." This he seems to have assumed as an *axiom;* certainly with him it is a fundamental article of belief, yielding neither to argument nor to facts. We will cite some of the expressions by which, in

* See remarks, Proceedings of Fifth Convention, pp. 91, 92.

his later writings, he repeats and illustrates it,—Annals, X., 67. "There is no translation about it. Written words are the written representation of spoken words to speaking persons, and of signs to the mute. Written words are not the representation of ideas directly to either,—that is the province of ideography." Again we cite,—Annals, VI., 171. "Whenever he (the deaf-mute) sees or thinks of this written word, is not the methodical sign, as naturally and necessarily, neither more nor less, connected with the written word, as the articulate sound or word *government* is with the same written word in the mind of the speaking child? Are not the cases the same? Has the deaf-mute child a greater mental power of abstraction than the speaking child?" And he presently adds, to show what, in his view, is the absurdity of the contrary opinion, "The articulate word cannot be dismissed from the mind of the speaking child, but the sign-word can from the mind of the non-speaking child; and he acquires the unnatural and almost miraculous power of thinking in written words alone, altogether dissociated from signs, natural or methodical. They become to him instruments and objects of thought, but cannot be to the speaking child, not even to the greatest philosopher. I repeat, how, I cannot see." This inability to see what is obvious enough to others, runs through all Mr. Jacobs' articles on this subject, during a quarter of a century. He could see no better in April, 1859, than he could in 1834. He asks in his article of the latest date, (Annals, XI., 69,) "Is not the written word as much the representative of the sign as of the spoken word?" and utterly rejects and ridicules the doctrine that the relation of words to signs is simply in their expressing the same idea, like the relation between the corresponding words in radically different languages.

Thus holding so peremptorily that the deaf and dumb can understand words only by the intermediation of signs, (though, we ought to add, he makes an exception in the case of words that are names of visible objects, whose images in the mind may be used instead of signs,) Mr. Jacobs consistently holds that every word should be associated with some simple and

convenient sign; that, for the educated deaf and dumb, the process of reading is the mental and bodily repetition of these signs, as recalled by the words, of course in the strict order of the words; as without such repetition, the sight of the "naked written characters" will suggest no idea, (beyond the images of visible objects at least.)

This theory may seem a simple matter enough; but when we undertake to carry it out logically in practice, we soon find that we have begun a Herculean and interminable task. The colloquial dialect of the deaf and dumb, however expanded and improved, presents only signs for ideas. It has nothing corresponding to the grammatical particles and inflections of speech, and is very deficient in general terms. Now, as Mr. Jacobs' theory demands a sign for every word, grammatical particles included, and those signs varied to correspond to the changes which words undergo by prefixes or inflections, the teacher who adopts this theory, finds that he has to face the task of devising, or learning, if devised by others, signs, not merely for the scores of thousands of words properly belonging to our language, and for their modifications and inflections, but also for an interminable list of geographical and historical names, and scientific terms. Teachers naturally recoil from such a labor, and inquire whether it is indeed necessary. And finding that many teachers of deaf-mutes succeed at least as well by using only the signs they find colloquially in use among their pupils, it is naturally to be expected that the laborious invention or acquisition of signs for every word should fall into disfavor and disuse.

We should regard this simple fact, notorious and unquestionable as most readers of the Annals know it to be, as a sufficient refutation of Mr. Jacobs' theory. If many teachers who utterly reject methodical signs, yet teach their deaf-mute pupils to read and understand written language at least as well as those who do use them, most evidently such signs are not necessary, and there is no sufficient reason why the teacher should incur the great and interminable labor of devising or learning them; a labor certainly not diminished

by a condition much insisted on by Mr. Jacobs,—that such signs should be, not arbitrary, but as naturally significant, taken individually, as colloquial signs.

He says, (Annals, V., 104,) "signs, by whatever name they may be called, that *represent words only*, and do not convey the meaning of the words, ought to be discarded." And again, (Annals, X., 67,) "I advocate the use of significant signs, the same individually considered as are in colloquial use,—in the order of written language." He, therefore, holds that the sign should vary with any marked change in the signification of the word; e. g., when the verb *bear* signifies to *yield* or *produce*, he would sign for it according to this new meaning. (Annals, V., 108.)

Notwithstanding this change in the sign for a word, determined not by any change in the form of the word, but by its signification as determined by its connection with other words, Mr. Jacobs still persists in holding, as he expresses it in the heading of his last article in the Annals, that "the relation of written words to signs [is] the same as their relation to spoken words." It seems to be in vain that he has been repeatedly reminded by his opponents in this discussion, that the mere sight of the written word, if we know the alphabet, determines what spoken word corresponds to it, the idea depending on the connection and arrangement of the words; while in the case of reading by signs, on his own principles, the sense must be gathered from the whole phrase before the correct signs can be made for each word. As Mr. Burnet expresses it, (Annals, VIII., 52,) "Instead of the signs for each word enabling them [the deaf and dumb] to understand the sentence, they must understand the sentence before they can make the proper signs for each word."

The inability of Mr. Jacobs to make the obvious logical inference from this fact, can only be accounted for from a notion that he repeats so often as to show it has full possession of his mind; that the attaching ideas directly to "naked" written characters,—that is, the "thinking in written words alone," is an "unnatural and almost miraculous power;" that this "thinking in written words," (which in

this case, however, means only that the mere sight of the written words, in their connection, suggests directly the ideas they represent,) requires "a power of abstraction," which the "greatest philosophers" do not possess, and of which, therefore, the comparatively undeveloped mind of the deaf and dumb must be incapable. It is in vain that he has been reminded that if there is any "power of abstraction" in the case, it is exercised in remembering and repeating the written words as mere visible forms, independent of the sounds or articulations they represent, which the "greatest philosophers," who have learned written words as mere representatives of spoken words, cannot do, but which the deaf and dumb must do, whenever they remember and repeat written words at all. Every reader of the Annals knows that, while we cannot repeat written words without thinking of the corresponding spoken words, deaf-mutes do every day repeat written words for which they have as yet learned no signs.

To present Mr. Jacobs' theory with entire fairness, we add his latest exposition of it, (Annals for April, 1859, pp. 68–9.) "My positions are then summarily these: that spoken words are not the ideas themselves, but are, beyond a very limited extent, the necessary and usual agents or instruments and vehicles of thought. This is the doctrine of all writers on intellectual philosophy, I believe. Written words are the representatives of the spoken words, and the ideas conveyed by them. So, significant signs are the necessary agents, beyond the same limited extent, of thought, and the means of its conveyance to deaf-mutes; and written words become to them, consequently, the representatives of the signs and ideas communicated by them.

"Educated deaf-mutes, then, think in the written words, and the associated signs. The proper corollary from these premises is, that the order of thought and words in the English language being inverse to the colloquial dialect of deaf-mutes, the effort ought to be made to interpret written language to deaf-mutes by signs in the order of words, so as to lead them to think,—while composing,—in the order of words, and lay aside, as much as possible, their reverse order

of thought. If it were Latin we were teaching, then their vernacular dialect would be the proper instrument of instruction, corresponding naturally, for the most part, with the Latin order."

This correspondence between the "vernacular dialect" of signs, and the order of words in Latin, amounts only to this, that, we can, for the most part, make intelligible Latin sentences by placing the words in the order of colloquial signs, which we cannot do with English words. It is, however, wholly immaterial to the present argument how far the natural order of signs agrees with the order of words in Latin.

Neither is it material to inquire how far and with what limitations spoken words are the "necessary and usual instruments, [we decline to use the word *agents*, which does not seem to us appropriate,] and vehicles of thought." The only remark we have to make on this point, is that Mr. Jacobs assumes the whole matter in dispute when he affirms that "significant signs are the necessary agents [i. e., instruments] beyond the same limited extent,—[a reservation evidently intended only to meet the case of direct intuition, which, by the way, is limited or not, according to circumstances,]—of thought and the means of its conveyance to deaf-mutes." If "significant signs" are the "necessary instruments of thought" to the deaf and dumb, of course they can only read by substituting signs for the words before them. But if, as most readers of the Annals know, words can and do become for them the direct signs of ideas and instruments of thought, then the intervention of signs is no more necessary than is the repetition of an English word for each Latin word, which the young student of Latin may find necessary in the beginning, but which he disuses as soon as he has made a little progress.

This point, then, on which the whole controversy turns, is a simple question of fact, which almost every reader of the Annals can settle for himself by experiment and observation. It is remarkable how stubbornly Mr. Jacobs here shuts his eyes to the notorious facts to which his opponents have so repeatedly appealed,—the case of Laura Bridgman, for in-

stance, who uses no signs whatever, employing words spelled on the fingers as her primary means of communication, and instruments of thought; and the cases of multitudes of deaf-mutes, who gather the meaning of words sometimes from explanations in pantomime, sometimes from the mere circumstances in which they see them used, and use them correctly, without having any corresponding signs. To the same purpose, is the notorious fact that the colloquial dialect of many imperfectly educated deaf-mutes, by which only they can converse with the hearing persons around them, is a mixture of signs and words,—the latter sometimes employed singly, sometimes in phrases; in each case, evidently, the spontaneous expression of thought. And no other reason can be shown why whole sentences should not be as well used as the direct expression, and hence inward medium of thought, than that the comparative tediousness of spelling or writing sentences out at full length, prevents written language from becoming sufficiently familiar.

And in spite of Mr. Jacobs' discourteous "*Credat Judæus*,"* we both repeat the assertion, that deaf-mutes do sometimes forget by disuse signs, while they retain and use correctly the corresponding words; and also accept the logical consequence, that if a deaf-mute does forget *some* signs, while he retains the use of the corresponding words, then it is possible,—given the "certain circumstances,"—that he may forget *all* signs, while he retains the use of words learned through signs.

But as the "certain circumstances," which will cut off a human soul for many years from its most rapid means of intercourse and best medium for intellectual development and social communion, are by no means likely to occur, we suppose that, though the possibility of teaching language to a deaf-mute, without using signs, is an established fact, the possibility of bringing a deaf-mute to forget, by total disuse, a whole language of signs once learned, will continue, for our time at least, a pure subject of speculation.

* See Annals for April, 1859, pp. 72, 73.

Leaving the facts, (notwithstanding Mr. Jacobs is pleased to regard them as "pure assumptions,") with full confidence, to the reader's memory or observation, we return to Mr. Jacobs' "positions," and observe, once more, that the whole question turns on the supposed *necessity* for the intervention of signs to enable deaf-mutes to attach ideas to words.

That this intervention is not a *necessity*, facts abundantly show. It may be made a mental habit, but the expediency of doing so is a distinct question.

We repeat, with the confidence of entire conviction, our "proposition," which Mr. Jacobs cites as the "fundamental error" of "Dr. Peet's views:" "The association between the sign and the word is just like the association between the corresponding words in radically different languages; the only connection is in their expressing the same idea." The arguments by which Mr. Jacobs seeks to combat this "proposition," are singularly deficient, both in fairness and force. He assumes that "in his [our] view, there is no more difference between the language of signs or gesticulations,—the pantomime of deaf-mutes, and the English language,—than there is between the latter and the French, or any other spoken language. The relations [those between English words and signs, and those between English and French words,] are precisely, positively the same." As thus stated by himself, Mr. Jacobs may call it, if he pleases, "a proposition amazingly paradoxical, to say the least of it." But the paradox is of Mr. Jacobs' making, not of ours.

We never dreamed of affirming that there was no more difference between signs and spoken words, than there is between two spoken words; but simply that, as we learn to replace one *spoken word* by *another spoken word*, as an instrument of thought and of communication, so the deaf and dumb may and do learn to replace *one visible sign* by *another visible sign* for the same use. Words are not spoken words to them; they are merely visible forms. All that Mr. Jacobs advances with so much earnestness about the *significance* of signs, and their being the usual medium of thought, to the deaf and dumb, where it is not a *petitio principii*, is wholly

aside from the purpose. Our mother tongue is to us the usual medium of thought, and as "significant" to us as signs are to the deaf and dumb; indeed, much of the boasted significance of signs, is derived, in whole or in part, from usage, just as that of words is; yet we learn to use the words of another language,—at first wholly arbitrary and without signification to us,—as the direct signs of ideas, not troubling ourselves at the moment, to run over the more familiar words of our vernacular. Just so, as our *facts* show, deaf-mutes learn to use words under some convenient visible or tangible form, as the direct signs of ideas; not perhaps forgetting, but yet not taking the trouble to repeat even mentally, the signs that express the same ideas.

It is admitted that this ability to read, by getting the ideas directly from the visible words before them, and to compose, by the direct contemplation of the words to be used, and knowledge of their meaning and relations, is a difficult and slow acquisition for the deaf and dumb. But we hold that it is at least as difficult and slow where Mr. Jacobs' "signs in the order of words" are used, as where colloquial signs only are used.

For even Mr. Jacobs will admit that if signs are the "necessary" or "usual" instruments of thought to the deaf and dumb, it is what we call *colloquial* or *natural* signs that fulfill this office,—not methodical signs, or signs made parallel in syntax and inflections with speech. To make signs for each word of the sentence, in the order of the words, will give a deaf-mute, in most cases, either an erroneous idea of the sense, or none at all, unless he has previously been carefully practiced in this order of signs and words. To get the sense in his own vernacular, he must make a mental paraphrase into colloquial signs; and he can learn to do this at least as well from the words themselves, as from the methodical signs associated with them. This is a consideration that our zealous advocate of "signs in the order of words" may profitably ponder. It appears to us that the deaf-mute, who reads by making a mental paraphrase of the sentence before him into his own vernacular, will be more likely to

get the sense correctly, than he who makes a sign for each word; just as a beginner in Latin will get the sense better by mentally arranging the Latin words nearer the English order, than by attempting to render word by word, each Latin word by an English one.

We have more than once expressed the opinion that methodical signs, to some extent,—that is, signs for the more usual grammatical inflections and connecting particles, when skillfully made, are useful in the earlier lessons, for the more ready dictation of words and sentences. They save time, and thus help the teacher to impress the order of words more on the memory by more frequent repetition, and also to explain the mutual relations of words, and the change of inflection with the change of connection. But such signs are not *necessary*. The use of them can be and is supplied by other expedients. The pupil, under a skillful teacher, (for, after all, more depends on the ability of the teacher than on the system adopted.) will learn to read and write about as well, if he never sees signs for individual words at all, but only learns to interpret written language into his colloquial signs, phrase by phrase. And in this latter mode, there is less danger of his going over the lesson without understanding it.

We have said that more depends on the ability of the teacher than on the system adopted. It ought in fairness to be added, that only a teacher gifted with much facility in the language of signs, can succeed well in using methodical signs; and as such a teacher is generally sure to succeed in spite of the errors of his system, the methodical signs have not unfrequently got credit for success, that was due to the expertness of the teacher in bending the colloquial language of signs to correspond in some measure with the order of words.

And in justice to Mr. Jacobs, we should add that his practice seems to be better than his theory. He represents himself (Annals, VII., 72–3,) as solicitous to disuse, as much as possible, all signs whatever, presenting sentences, as soon as they have become familiar, by dactylology alone; explaining,

where necessary, by signs in the order of the words, and restricting to colloquial signs in new and difficult cases. Such rules, skillfully and zealously carried out, will ensure a fair degree of success, in spite of his errors in theory.

Mr. Jacobs' remarks on the teaching of Latin, "according to his views," are not very clear. So far as he holds to beginning with simple sentences, "the same forms being repeated," we fully agree with him. But the translating "literally word for word," is condemned by very high authority. We will here only refer to an article on the "Method of Teaching Latin and Greek," by Prof. Lewis, in the March and May numbers (1856) of Barnard's Journal of Education. He says, (page 480,) "It is the continual pressure on the mind, the feeling of difficulty, of weariness, of obscurity,—in other words, the painful sense of inadequate expression, that comes from the commonly used verbal modes of translating, which is the great obstacle in the way of progress, the great hindrance to rapid and extensive reading." "The pupil begins to think in Greek; and this thinking is now unincumbered by those cloudy, suffocating media which are neither Greek nor English; being deficient vehicles of the sense in respect to the one, and barbarous combinations of words unknown to the other." Substitute English for Greek, and the colloquial language of deaf-mutes for English, in the above quotation, and its applicability will be evident. We here only present Professor Lewis' views as entitled to respectful consideration, and a consideration we have not now time to give them.

We have given Mr. Jacobs' summary of his own positions, (from the Annals for April, pp. 68–9;) we will conclude with a summary of our own. We hold that signs are not ideas, but being the readiest and most natural, are the favorite instruments of communication, and hence of thought, for deaf-mutes; that it is not very material whether a sign is naturally significant or not,—once generally adopted, it acquires significance as a word does, by *usage;* that words written or spelled on the fingers, *may* and *do* become the direct signs of ideas to the deaf and dumb,—the main obstacle to their

use being the comparative tediousness of communication, which prevents them from becoming sufficiently familiar to the mind; that hence deaf-mutes can learn to read by getting the sense directly from the visible words before them; that this being the highest degree of success in teaching language, should be the object of the teacher's efforts, the intermediate stage of success being the mental interpretation of sentences, not word by word, but phrase by phrase, or sentence by sentence in colloquial signs.

As to the point on which Mr. Jacobs lays so much stress,—the use of signs in the order of words to accustom the pupil to think or arrange his ideas in that order, we observe that even Mr. Jacobs does not claim that his pupils think habitually or spontaneously in his methodical signs. If, as appears to be the case, they use those signs only in connection with words, it is evident, (and is shown by the experience of many other teachers,) that they would get accustomed as well to the order of the words, from using the words themselves, without the methodic signs. And if their want of entire familiarity with written language compels them to make a mental paraphrase in colloquial signs as they read, they are likely thus to have a clearer perception of the sense.

The practical result of the views we have expressed is, that we would use the colloquial language of the deaf and dumb to the fullest extent, for the interpretation of words and phrases, and would even aid the pupil's efforts to supply, as far as suitable signs are discoverable, its deficiencies in general terms; that we have no objection to the explaining of the earlier lessons by signs skillfully presented in the order of the words, but caution the teacher that this is an unsafe practice in unskillful hands. The interpretation of language by colloquial signs is surer, saves labor that may be more profitably bestowed, and presents no material disadvantage on the score of familiarizing the pupil with the order of words, provided the teacher is careful to use words themselves, whenever he can make himself understood without signs.

It may be well to add that the teacher who uses chiefly

colloquial signs, will, perhaps, be more apt than he who follows Mr. Jacobs' theory, to observe Bebian's great principle of dividing and graduating difficulties. At least, it seems to us, on a somewhat hasty examination of the sketch of his Series of Lessons, presented by Mr. Jacobs at the Jacksonville Convention, while we find much to approve in the details, the graduation of difficulties in the earlier Lessons is not such as we would prefer.

Repeating the assurances of our high esteem for our able and respected opponent, we trust that if he finds in this article any unintentional misstatement of his views, or any flaw in our reasoning, he will not suffer his previous declaration that he was tired of the discussion, to prevent his setting us right for the benefit of our younger brethren, who look in the Annals for the fruits of reflection and the lessons of experience.

DAILY CHAPEL EXERCISES.

BY BENJAMIN TALBOT,
Instructor in the Ohio Institution for the Deaf and Dumb.

A FEW thoughts on the daily chapel exercises in our Institutions may not be inappropriate, or unacceptable to a portion at least of the readers of the Annals.

Every thoughtful and conscientious teacher of the deaf and dumb, (and none other ought to fill this responsible office,) will often ask himself, What good am I doing to the pupils by this part of my labors? and how shall I increase the value to them of these daily services? If the thoughts here expressed shall assist any teacher in answering these questions, or shall stimulate him to greater faithfulness and efficiency in the performance of duty, the writer's object will be fully attained.

The first question which naturally arises is, What are the objects at which we should aim in our daily chapel exercises? These are, in brief, the same as those sought by the institution of the Christian ministry.

The superintendent or principal of an institution, *par emi-*

nence, and after him the teachers, hold to those under their charge the same responsible relation which the minister of the gospel sustains to the people with whom he labors. The end and object of their efforts should therefore be the same as his. And, though other opportunity ought not to be omitted, the proper time and place for these efforts are to be found in the customary daily chapel-service of our Institutions.

We should seek, then, in these services to secure the moral and religious well-being of our pupils; to "turn them from darkness to light;" and to encourage and advance them on the road to heaven. To gain these ends, we should labor to instruct them thoroughly in the Bible, teaching them that it is the word of God, given for our and their profit; seeking so to unfold its truths as to make them attractive to the mind and heart of the pupils; and giving them both warning and encouragement in due season, that they may be made wise unto eternal life.

But a faithful and conscientious discharge of our duty involves something more than this thorough instruction of our pupils in the truths of the Scriptures. We should seek, further, so to urge upon them the practical duties taught in the word of God, as to make a lasting moral and religious impression on their minds.

The teacher of the deaf and dumb is to fit his pupils for conflict with the trials and temptations of life; to implant in them right principles, and so help them form correct habits, that, when they leave his guiding and controlling hand, they may not be left to drift on the sea of life, without chart or rudder, the sport of every current or breeze of temptation, finally to be wrecked on the forbidding shore of crime, or to be swallowed up in the vortex of dissipated and abandoned habits. Against all this the teacher must guard his pupils as far as in his power, if he would most completely perform the duties which he owes to his charge.

The main object of our religious teaching will of course be to secure the conversion of the children with whom we labor. Correct habits and exemplary training, though in

themselves worthy, are as nothing compared with this, which ensures their everlasting welfare. And to this, therefore, we should bend our energies with earnest purpose, and patient careful Christian love for the souls of these unfortunate ones.

It is also our duty so to adapt our instructions to the spiritual condition of each and all, that any who are already in the right way, may be encouraged and strengthened to go on to perfection. Thus we are to secure, so far as human effort can do it, their growth in grace and their fitness for heaven.

The question now arises, How are these worthy, these exalted objects to be secured? Assuming that every teacher desires at heart the highest spiritual good of his pupils, how shall he in his chapel ministrations best promote this end?

Much will depend on a suitable selection of subjects for discussion and exhortation. These should be practical and pointed. Let the passage of Scripture be generally one of easy comprehension, and of direct practical value. Yet while we are ever to aim mainly at immediate practical effect, our religious instruction should not degenerate into heavy discussion or bare exhortation. It must be rendered interesting and attractive to the children, either by historic incident or abundant illustration.

Hence the narrative portions of the Bible will furnish plentiful and valuable material for this use; though we should, of course, not confine ourselves to these. The stories of the Bible, in both the Old and the New Testaments, rendered in the graphic and expressive language of signs, always wrap the mind of the deaf and dumb in profound and earnest attention. And with such a story to point the moral, we may always hope to make on the heart of the pupil the impression we desire.

Whether the teachers of an Institution shall explain the Scriptures in course, or make selections by topics, depends on the object which for the time is mainly desired. The first plan secures a more perfect familiarity with the Bible, and will assist the pupil in reading it connectedly; while

the other course is perhaps more likely to make direct and immediate religious impressions.

The treatment of subjects should be at once sober and earnest. We should let the pupils see that we ourselves are deeply impressed with the value of the Bible, and that we highly prize its teachings. Dealing with the word of God, we should preserve all the dignity and reverence of manner due to its sanctity and worth; and seeking to unfold and apply the truth which is "able to make wise unto salvation," how can we be other than earnest and impressive? Let the teacher himself be fully alive to the weighty importance of this instruction, and he cannot but impart it seriously and earnestly.

There are a few connected points of minor importance, on which a hint may not be altogether useless.

First, let all the teachers of an Institution make it a practice to attend regularly the chapel services, at least on week-days. Such an attendance will serve to show the pupils that their teachers take an interest in religious things, and especially in their spiritual welfare; and will tend to deepen any good impressions that may be made; while a neglect to attend these services will have a tendency to create the impression that this part of the school-duties is of no great importance, and may therefore be neglected or attended carelessly. We should all worship together, teachers as well as pupils, if we would gain for ourselves and for them the highest profit from this worship.

Further, let the pupils commit to memory, during the day, the text used in the morning exposition, and let some one always be called upon to repeat it at evening prayers. They should likewise expect to be questioned on its meaning and explanation, as also on the moral and religious lessons drawn from it. This will stimulate them to give closer and more fixed attention to the services, and so will secure a deeper impression on their minds and hearts.

In all this, there is need of some concert of plan among the teachers, so as to secure uniformity and harmony of ac-

tion, that the impression of one day may be suitably followed up on the next, and if possible, be deepened and strengthened.

Above all we need, and should earnestly seek, the blessing of God, the giver of all mercies, on this portion of our labors.

EARLY HOME INSTRUCTION OF DEAF-MUTES.

[The following narrative will be found exceedingly interesting and instructive. The modesty of the writer has induced her to affix an assumed signature; but the facts are so unusual, that we trust she will excuse us for introducing her to her readers as Miss Mary S. Waldo, of Minnesota City. There is really no necessity that such a case should be so uncommon as it is. Similar resolute efforts on the part of parents, might often, no doubt, accomplish similar results.—EDITOR.]

MR. EDITOR:

I have read the Annals with great interest. I send you a paper for insertion in the Annals, if you think best, upon the subject of the early home instruction of mute children. It is with hesitation I venture to forward it, yet hoping that it will be useful in encouraging the parents of deaf-mute children to use efforts for their instruction, previous to entering an Institution. I understand, if I mistake not, that it has been a subject of discussion, whether it is best to begin the instruction of mute children so early as five years of age, and that there is a primary school in New York for this purpose. I hope, however, you will not think me egotistical if I relate a brief story of my experience on this subject.

Years ago I was born on the Western frontier. Scarlet fever visited our community, and many children became its victims, among whom I was one. At the age of two and a half years, after a long sickness with this fever, I lost the faculty of hearing, and consequently of speech. This misfortune was a sore trial to my parents, especially to my father, who felt, for the time, that death was preferable, for me, to a life of silence. When I was five years old, my parents felt it necessary to commence some course of instruction with me. But they had no mute relatives or acquaintances, and were entirely unacquainted with mute instruction. However, my mother, in searching among old

papers, found an old manual alphabet; also, an old book which had been thrown aside as useless, compiled by a Principal of an Institution in Dublin. It was partly in French, and gave an account of the invention of the manual alphabet by De L'Epee; also, of the early instruction of the deaf and dumb in France. With the assistance of these, they commenced my education, although they had no knowledge of the sign-language.

My mother printed with a pen the letters in capitals on small cards, and tried to teach me, but I was very refractory. My father, leaving his business, determined to take her place, and spent a part of a day in teaching me. He set his *cap* upon the table and pointed to it. He spelt *cap* on the slate in capital letters; he formed the letters with his hands; he made me form them; he formed the same words with the letters on the cards. This was often repeated, until I began to perceive some connection between the letters CAP and the cap on the table. He made me bring him the cap, and continued writing the word, spelling it with the fingers, and forming it with the cards, until I comprehended what he meant. He also placed a pin and a cup on the table, and proceeded in the same manner for more than half a day, until I could with readiness spell these three words. I was impatient and anxious to play, but my father was positive, and I was compelled to submit.

From this time I found that every thing had a name, and I was eager to learn. My mother tells me, for I do not remember these particulars myself, that I would get the slate, and lead her about from one object to another, inquiring the name. She would write it on the slate, and then I would copy it, so that I learned to write at the same time I learned to spell. I soon learned my name, the names of my father, mother, sisters and friends. Mother used to take me with her in her rambles, taking the slate, and pointing out whatever objects met her eyes,—such as fence, barn, trees, &c. I learned to write and spell a few new words every day, which my mother taught me.

I dimly recollect, when I was six years old, or more, that,

as I ran skipping into the room where my mother was sitting, she beckoned me to her, spelling with her fingers, and explaining by signs the word "happy," which I learned to spell in this way.

Mother taught me some verbs and adjectives, but I did not understand the meaning of the small connecting words, so that my construction of sentences was very imperfect. For instance, the words *the*, *of*, *is*, *was*, *am*, *in*, &c., I saw were very important, (because I often noticed them in my writing-book and other places,) and I frequently introduced them so as to make my sentences very ridiculous, although I was very much puzzled at their meaning.

My mother set me copies in my writing-book, by which means I acquired quite a good hand-writing, though I did not comprehend the meaning of many of the sentences. These were generally a kind of journal, or record of passing events. When my mother was busy, I felt it my duty to set my own copies, some of which have been preserved, and I will send you a few samples. "Baby is ink fall." "The horse is want John." "Sunday is Betty is bible read Learn." "Ricket preach the home go Ricket." "Mrs. D. and saying girl lesson the Geography."

I also wrote letters to my father, in his absence from home, and to other friends. I will send you a few extracts.

"Dear Cousin:

"I am well, write Father better sick not. Martha is book black give Mary pretty book is the. Betty school in lesson read girl boy. Mrs. D. Spring like med. (medicine) water drink well, sick little Lucy. Baby wake want sleep little. Eliza C. pretty is come little want."

"Dear Father:

"I am you write well letter. Father steamboat come new. St. Louis big house Mississippi water. Aunt L. loom work bed. Jane cook. B. doll broke. Ellen doll want. E. is play walk. Mary bed sew. Harriet is cross mad. Mother dream think. Man drunk house fall. Rain light dark. Winter cold come. Dr. L. go Virginia see mother. Steamboat quick, rain lazy water little. John mad

not work. Lady come see stay. Mother write letter. Mary think letter write."

Instead of being allowed to run about in idleness, my mother contrived plans to make me industrious. She taught me to assist her in her sewing, and to do some fancy needle-work. I was taught the existence of God; that he made the world, but I did not well comprehend it. I was told that good people who love God go to heaven, and bad people go to hell.

I had never seen any thing of death. One day, visiting my aunt, in walking out, she showed me the grave of a little emigrant child, about two years old, and explained to me by signs that it was buried there. I ran to the house almost frantic, and told the family that a little baby was down in the ground, and could not breathe, and begged them to get the hoe and spade, and dig it up. After a while, my mother succeeded in pacifying me, by pointing to the sky, and telling me that the baby was laughing and happy, up there.

During a thunder-storm, on a dark night, my mother found me alone on the porch, watching the lightning; and when I came in, she says I asked her if the lightning was not the angels flying from earth to heaven. This fancy she supposed was caused by having seen pictures of angels in Bunyan's Pilgrim's Progress.

I was also instructed to keep the Sabbath holy, and the sin of lying and stealing.

As there was no school for the education of the deaf and dumb established in my own state, my parents decided to send me to an Institution in a neighboring state, and I entered this Institution at the age of eleven years, and became a member of the class which had been under instruction nearly two years.

My story is finished. My only apology for writing so much concerning myself is, that I thus hope to encourage the efforts of parents and friends to teach the first elements of education to their unfortunate children, before they are of a sufficient age to enter the Institution. I see no reason why

their minds should be left an utter waste, all the years before this time.

These Institutions are among the greatest blessings of the age in which we live. But when the facilities for teaching the Deaf and Dumb are becoming so abundant, why cannot the rudiments of knowledge and the foundation of good principles be taught early in life, before the proper time arrives for their entering the Institution ?

BLANCHE.

SCHOOLS FOR THE DEAF AND DUMB IN SAXONY.

BY DR. HERMANN WIMMER.

[Dr. Wimmer is a German, and an able classical teacher, now of Borna, near Leipzig. He once spent some years as a teacher in an American College, and has interested himself much in the subject of education in general. He has been a frequent contributor to the *American Journal of Education*. This paper comes to us through the kindness of Dr. Barnard, editor of that work. The writer, as would be natural, evinces a partiality for the method of instruction prevalent in Germany. It will be seen, however, that he admits the importance of pantomime.—EDITOR.]

THERE are two institutions for the deaf and dumb (*taubstummen-institute*) in Saxony,—one in Dresden, and another in Leipzig. The latter was prior in time,—the first in Germany, founded in 1778,—and was under the guidance of the well-known *Heinicke*, who tried first on a large scale, the method now common in Germany, of teaching the deaf-mutes to make use of their tongue as we do.

The task is certainly a hard one, and requires a good deal of patience and perseverance, since they must be shown severally the movements of the tongue necessary for producing the various sounds; yet it should not be doubted that it is the more natural way. For, every one, except perhaps a professed adversary of the method, will agree that it is more natural to remove, as far as possible, the unnatural defect, and to bring the deaf-mutes, by the common way of education, nearer the standard of a man with his full senses, than to pursue another easier course, because nature appears

to have refused the use of the tongue. Now, it is not a defect of the tongue that makes a person deaf and dumb, but of the ear.

Another objection is made by the adherents of the French method, viz: that the method of signs is more natural, on account of its being the language used by all deaf-mutes when conversing with one another in their uneducated state, and even at any time; but that natural pantomime, which they acquire without teaching, and in which they advance in proportion to the increase of their knowledge, must be everywhere the language by which they are taught first, and will always, more or less, accompany the conversation of teacher and pupil, and will be the prominent, sometimes the exclusive, language used by the deaf-mutes with each other. This, I understand, is the case here and there.

However, it would be quite erroneous to conclude therefrom that the way pursued in France and America is more natural. Every thing, we know, has its name. These names or words make up the language, which, by the various combinations of these words, expresses the various ideas. It is *this* language, which must be learnt some way or other, if it were only for writing and silent reading. The common pantomime, clear as it may be on the whole, and vivifying an entire strain of ideas, is indistinct and crude in itself; and will remain so, simply because the teachers of deaf-mutes think and act through the common national channel, and aim to raise their scholars to an understanding of those very words, in which all their own thoughts are couched, and by which intercourse with their living or dead fellow-men may be possible. But the written and read word is only a representation of the living word for communicating one's ideas with another. Now, the pantomime failing here, a distinct "speaking," or representing the single words without writing, was needed, and this caused the invention of the Manual Alphabet, or the finger-language, whilst the common way of using the tongue, or of articulating, became the general method in Germany. Therefore, the question is not between pantomime and articulating, but between the arti-

ficial manual alphabet and the, under the circumstances, likewise artificial, but in itself more natural articulating. Both are assisted by the pantomime.

Standing on this ground, all would at once approve the German method, if a question did not arise of great importance. It is, whether the benefit from teaching "speaking" is in proportion to the pains taken and the time spent with it, and whether the result justifies that method? This question has been answered on the part of America in the negative, and in favor of the before adopted Manual Alphabet. We cannot say that the choice or rather the judgment has been impartial. For, that greatest benefactor of the American deaf and dumb, Mr. *Gallaudet*,—whose memory I revere, myself having had the opportunity of becoming acquainted with the modest, pious and courteous gentleman, and of conversing with him on this disputed point,—was a pupil of *Sicard*, and only of him, as well as his co-laborer, Mr. *Clerc;* and the then most prominent or best method was introduced into the first American Institution. Then there was not nor could be any doubt about the right way. After the time of Mr. *Gallaudet's* resignation of his principalship, Messrs. *Weld*, *Day* and *Peet*,—going to Germany, on Mr. *H. Mann's* report in favor of the German method,—were all teachers grown together with their method, and, in spite of all assurance of impartiality, were naturally as much prejudiced and partial, as a German teacher of deaf-mutes would be on visiting the American schools. Their judgment may have settled the question for America, but can never settle it for the world. After what I have seen in Hartford, Dresden, etc., I must still declare the question an open one, on which myself do not venture to decide, only to make suggestions by what was intended to be a very plain exposition of the disputed points.

Our deaf and dumb boys and girls, when they are thought mature for "confirmation" and leaving school, (15 years old and upwards,) they are considered intelligent enough to run the same race of life, as hearing boys at the age of 14, after eight years' attendance of a common school. Then they

enter the shop of a shoemaker, tailor and the like, as apprentices, the master being tendered on their entrance the premium of 50 thalers. The same sum is tendered to those who give the practical instruction to girls. The boys in this way may, and most of them do, work out their independence; not to mention that some talented young men have become eminent as lithographers and paper-relief printers. But the poor girls are sent home, and are chiefly dependent on needle-work, which, however, is stated to provide for all the necessaries of life.

On the other hand, it is true that an assembly of American deaf-mutes, as I saw in the Center Church of Hartford, at Gallaudet's day of honor, or any set of deaf-mute men in America, may outshine a similar assembly of German deaf-mutes, by respectability of appearance, a better situation in civil life, and to those who understand their peculiar language, even by the appearance of higher intelligence.

Yet this is not, I think, the result of a better education, but of the by far more fortunate circumstances, in which a young industrious mechanic, even of the poorest class, is placed in the United States. This is a fact too well known to dwell upon. I should not wonder if this better situation in society, with all its apparatus of comfort and self-education, did in this, as in other cases, produce a greater degree of intelligence,—not only the comfortable appearance of it, although to judge of the inside, would be too difficult with any kind of certainty.

The American schools, having more time to devote to writing, arithmetic and reading of all sorts,—nearly so much more as they gain by not teaching articulation commonly,—it should not be doubted that their pupils are in this respect somewhat in advance of the German schools,—as I may state that diligent boys in a higher class of an elementary school in the United States are in geography and perhaps some more respects, in advance of German boys of the same standing and application, so much as they gain by not being taught religion,—yet the ex-pupils of our schools must be considered as sufficiently drilled in the chief elements of a

common school education, to make themselves useful, and as so far prepared in religion, that they are able to live henceforth a Christian life. The time allotted to the education of our deaf and dumb by government, and at the expense of the parish, (the poor parents,—as most of them are,—have to pay but 10 thalers a year; but, if unable to pay even that, the parish is bound by law to pay; to make up the rest, the state adds a very considerable sum to the interests of the charity funds;) was until lately but seven years,—i. e., one year less than hearing children are compelled to attend school. I have reason, however, to suppose that this time will soon be lengthened, on the joined petition of the two principals, to eight years. The age for admission is fixed on not less than the eighth year, so that the youngest person leaving the Institution will be sixteen years old. It is rather wonderful that, with all their drudgery of articulating, deaf boys, who have to learn a good deal of what other children know before they enter school, should, by the same length of school attendance, be made sufficiently acquainted with the Bible, and with the chief precepts of Christianity, as well as with writing, arithmetic, and the common knowledge of human and natural things, to pass over into practical life like other boys under the care of their masters, and finally to succeed in life.

Now, we may allow to the highest class in America a superiority over the same class in Germany, in geography, history, arithmetic, and yet ours have acquired a *power* that places them higher,—a power—I must use and repeat this very word—that cannot be supplied by any efforts in after life, as a higher degree could in any kind of knowledge, nor will have even nearly the same value with those few more fortunate, who are taught articulation as by-work. I mean of course their "speaking," of whatever degree, and their "reading on lips," how slight soever the beginning may be.

[The writer proceeds to give some reasons in favor of the German method of instruction, but as the arguments on this subject are already quite familiar to our readers, we do not care to reopen the discussion at this time. If our opinions are to

be changed, it must be by adducing facts and instances, not by reasonings and general statements.

There is a foot-note, which we ought not to omit, in relation to the institution at St. Petersburg, Russia, as follows :— "I may state on good authority that the principal of the institution in Petersburg, visiting lately the schools of Germany, England, etc., on his return to Dresden, has declared himself particularly gratified with the school in this place, and spoken of his and his government's desire to change the old French plan in the Petersburg school in accordance with our method." He adds, "By the latest news, the German method has entirely superseded the other."

Dr. Wimmer thinks that there ought to be set up in the United States at least one school which shall follow the German system, for the special benefit of those mutes who retain some hearing, and those who lose their hearing after learning to speak, and of others whose parents might prefer that method of instruction.]

The ratio of deaf and dumb persons to the population in *Saxony* is 641 to one million. The institution in Dresden receives now 100 pupils,—the elder sister in Leipzig has been enlarged for the same number,—but by the unceasing efforts of the present director and founder of the Dresden Institution, Mr. *Jenke*, who began with a few pupils in *Fletcher's* Normal School at Dresden, about twenty-five years ago, two wings more will be added to the stately edifice, so that all deaf-mute children in Saxony will soon find room and good-will for their education.

By the same friend of humanity, an establishment, peculiar to Dresden I think, has been attempted successfully in 1839,—an "Asylum" for the poor deaf and dumb girls who have no home that could receive them after leaving school. From 1839 to 1844, Mr. *Jenke* kept several in his family, but then a separate house with garden was hired, which has since become the property of the Asylum. An association of ladies, under the patronage of the queen-dowager, has taken the administration of the Asylum into their hands. The number of beneficiaries is still small,—about

ten,—but what a benefit to those! and with the increasing capital, it will be extended to many more. The funds amounted at the end of last year to 2,847 dollars, besides the house, valued at 4,200 dollars. Expenses of the year, 1,527 dollars. The highest sums of income in the year were 829 dollars, from charity concerts, etc., and 374 dollars from the earnings of the girls. For one girl who left the house, two were admitted.

Another charitable work for the poor deaf-mutes who had left school, was undertaken by the same Mr. *Jenke*, in collecting general funds for assisting them. This he succeeded to do, chiefly by creating a new paper,—"*Freie Gaben*,"—("free gifts,"—applying by this title to the authors for free contributions to the good cause,)—a bi-monthly of 50–56 pages, sold for $\frac{1}{6}$ thalers,—6 English pence. On the outset of this enterprise in 1851, the funds collected by him for this purpose were 622 thalers, but amounted in 1852, by the net proceeds from that paper, to 1,239 thalers, and now to nearly 3,000. The three-fold aim of this capital is, first, to assist poor apprentices without parents or relatives with clothes, etc.; (this has been rarely required as yet on account of the generosity of their masters;) then to assist poor journeymen in establishing themselves as independent workmen, or girls for a similar purpose; finally, to assist poor deaf-mutes who, by sickness or old age, have become unable to support themselves. It strikes me as the most interesting and useful, that the poor girls, scattered over Saxony, have been provided with yarn for knitting, at a good pay. Of the 489 pairs of stockings made by them, 255 have been sold, and the rest will no doubt find ready buyers.—(Freie Gaben, 1851.)

There is a quiet and unpretending charity going on in Saxony for all such institutions. I read by chance in the Leipzig Gazette that, "In 1857, the school for the deaf and dumb has received by donations and legacies, 50, 200, 150, 1,000, 100, 500, 300, 300, 200, 100 thalers,—in all, 2,900 thalers." The greatest donator of the Institution in Dresden,—then in its infancy,—and of the neighboring Institution for the Blind, was a Mr. Alsafieff, (18,300 thalers,)

whose memory is still, and ever will be, cherished by teachers and pupils. Could he revive and see the beautiful home he has prepared for the unfortunate deaf and dumb children by the side of their perhaps more unfortunate blind children, likewise cared for by him, and what since has been done in and for these institutions, he would rejoice and agree that never a legacy was trusted to better hands for a better cause.

THE DEAF-MUTE'S GUIDE.

BY JOHN CARLIN, OF NEW YORK CITY.

Mr. Editor :—Agreeably to my mention in the Annals of the January number, I send you this communication,—hoping that it will meet the general approbation of all interested in our welfare.

Before proceeding with my proposition for a new book, which may be appropriately called The Deaf Mute's Guide, I shall set forth a brief and, if possible, comprehensive view of the intellectual capacities and failings of the deaf-mute's mind.

Notwithstanding his loss of hearing, the nature of his sensorium is not in the least different from that of the hearing person's,—but, as all persons of all conditions cannot be expected to possess the same quality of mind, nor the same susceptivity of senses, nor the same retentiveness of memory, his (the deaf-mute's) sensorial faculty possesses more or less strength,—it depending solely on the physiological constitution of his brain. It generally retains for a long time impressions, which are so repeated on his memory as to procure their cohesiveness difficult to weaken, and loses others which need repetition, though it sometimes retains with tenacity impressions made but once of uncommon objects.

In the school-room, under constant training, his memory daily receives verbal impressions, which, if judiciously repeated, may be long preserved; daily his understanding of the principles of grammar is more developed, provided they are explained skillfully by his teacher, and practiced, as often

as possible, in his compositions;* his knowledge of things in the higher walks of literature expands to a respectable distance.† But as long as the present system of deaf-mute instruction is continued, his memory is more than amply stored with the indelible impressions of pantomimic signs. Their constant repetition and activity unavoidably render his verbal impressions *liable to fall off.*

The verbal and phraseological impressions of the hearing are repeated every day by hearing and speaking; hence, the fluency of their language, though always in different styles of diction. It is not the same with those of the deaf-mutes, save those who read regularly and write much, and with assiduity. But, though they may read a great deal, they cannot always expect to hold much communication with the speaking, who—I mean the generality of persons—do not relish this fatiguing sort of work. Consequently, many of their impressions, by reason of their being rarely used in writing or spelling on the fingers, either fall off or wax dim. Thus, as it has often been observed, they often hesitate, and fail to express correctly their ideas in proper words or phrases.

No doubt many well-educated mutes have in their possession such text-books and dictionaries as would surely recall their lost or dimmed impressions,—yet the thousands of our graduates, as well as pupils, are without a GUIDE.

What kind of a book should be constructed specially for their benefit? Would this desideratum, if obtained even by dint of toil, be really beneficial to them in their common walks of life? My proposition is, that the book should be so constructed, in a respectable-sized volume, as to consist of the fundamental principles of English grammar, with appropriate examples, illustrations, and the like; of a few principal principles of Rhetoric,—expressly to polish their lan-

* His compositions should by all means be so short as to afford his teacher time to explain more fully any rules of grammar or the meaning of any words, of which his errors indicate his ignorance or the fugacity of his sensorial impressions.

† I beg leave to say, I cannot agree with my friend, Mr. Ijams, that chemistry and other sciences should not be taught in our schools. The pupils of High Classes, like Prof. I. Lewis Peet's, are of a superior turn of mind,—therefore, they all should be rendered as fine scholars as their limited term could possibly permit.

guage; of such synonyms, with happy explanations, as would make exquisite their faculty of discrimination; of a vocabulary of words most necessary for their use, arranged in alphabetical order, perhaps with explanations, if deemed expedient,—as the transitive verbs, the intransitive verbs with their proper prepositions, the nouns with their appropriate prepositions,* adjectives, &c., &c.; and lastly, of some useful lessons in book-keeping,—a thing much needed by them in their business pursuits. Perhaps it will be considered desirable to introduce some rules of arithmetic just above the last-mentioned lessons.

This work being undertaken by one person, would require a much longer period than by several persons together. For this reason, I respectfully suggest that this labor shall be divided between the teachers at our Institutions,—the post of Compilership being conferred on some efficient person.

There are in Dr. Peet's Course of Instruction several very admirable lessons, in particular the fourth chapter in the Second Part, pre-eminently proper for insertion in the proposed standard guide.

I feel almost sure that the "honest desire to promote the interests of deaf-mute instruction," which have stimulated Messrs. Peet, Jacobs and others to labor, much to their credit, for the Deaf and Dumb, will warm once more their hearts; the genial warmth of that sentiment will give life to their minds, and cause their effusions to flow gently yet steadily down to their fingers' ends, and thence to the paper, and much to our joy will appear in all its comeliness the Deaf-Mute's Guide!

New York, June 8, 1859.

* Owing to the disuse and fugacity of our verbal and phraseological impressions, we are notoriously liable to be at fault with the proper relations of prepositions to such verbs and nouns as may be selected in expressing our ideas,—therefore, their importance as a guide in said book is obvious.

ON EMIGRATION OF DEAF-MUTES TO THE WEST.

BY EDWIN BOOTH, OF ANAMOSA, IOWA.

To the Editor of the Annals :

Some time last summer, or a year ago, I sent a communication to the Annals on the subject of "Deaf-Mute Emigration to the West," and have since had abundant confirmation of the opinion then expressed in favor of skillful and industrious deaf-mute mechanics removing to this region. In my neighborhood is an old acquaintance of many of the readers of the Annals, S. A. L., late of Willimantic, Connecticut, who removed here a year since at my recommendation, and who, in spite of the severe pressure of the times,—which is greater here than in the East,—has a good share of business, solely because he is skillful, industrious and faithful. Having induced him to come, I have naturally desired to know whether he felt disappointed at any time since his arrival, but could never get out of him any expression of dissatisfaction regarding that matter; and occasionally some whimsical scene occurs on the point in question. His wife, who is fond of a joke, sometimes, by way of badinage, proposes to him to return East. "East? No!" is his answer; "going east is going to the almshouse," etc., etc. He had worked at his trade of carpenter and cabinet-maker for twenty-five years, having a family the latter part of that time, and laid by a few hundred dollars. Here, in the natural course of things, and with industry and health, he will, in a few years, be worth some thousands; not that he will earn that naked amount, but by taking pay for work, during the present scarcity of money, in town lots, etc. Such property will rise in value with the completion of our railroads and other improvements, and thus, in a worldly sense, he makes more here in a year than he made in three years in the East.

I give the above case as an illustration. What the educated deaf-mutes of New England most need is accurate information regarding the West. I receive letters from Eastern people, and people, too, who might be expected to know

better, inquiring, among other matters, whether we have Indians among us, and whether they are dangerous, and what of the fever and ague? A strolling party, passing along north or south, once or twice a year, is all we see of the red skins, and fever and ague has so much decreased with the settlement and cultivation of the country, as to be scarcely known except in particular years. For the past few years, ague has been but little known in this region.

As in my former communication, I would advise deaf-mutes, who are good mechanics, not to crowd into one town or locality, if they all intend to work at one trade. Iowa, as regards railroads, is now where Ohio was, twenty years ago. We have railroads projected to run in all directions, and some of them are in process of construction, and others waiting for better times. Certain it is that in five years some of these roads will have been finished through the length and breadth of the State, and in twenty years from now, our six hundred and fifty thousand inhabitants will have increased to not far from two millions. Is it not clear that during these twenty years a large number of good mechanics will be wanted to construct houses, household furniture, mills, stores, etc? What better opening for the best mechanics of New England could be found, especially when by investing their surplus earnings in real estate and by prudent management, they could become wealthy, or at least well off, eventually, and with no danger, as our friend L. expresses it, of "dying in the alms-house?" It would be a good plan for such persons to settle in some of the many young towns along the already built or projected railroad lines. In the large cities, real estate is too high for them, and the cost of living greater. In the country towns they could take pay for work often in real estate, and at a low figure, and await, while they aid, the general progress.

In Anamosa, the place of my residence, are eight deaf-mutes,—all, except one, educated at Hartford, the exception being a New York pupil. Occasionally, in our conversations, the benefits of a removal West, and the ignorance of our Eastern friends on the subject, are matters of earnest

and sometimes vehement remark. We all agree that, if those in the East but knew the true state of things here, and the comparative ease of obtaining an independence, by means of skill in the use of tools, industry and good sense, half of them would be anxious to remove to these Western states. One remark sometimes naturally occurs, viz., that our Eastern friends should take Western newspapers, and thus familiarize their minds with Western doings and Western life. Many Eastern papers discourage Western emigration, and naturally enough, under the circumstances surrounding them; but a very large number of Eastern papers are taken in the West, and it would be but fair that Eastern people should take Western papers, and thus learn the truth which, to a large extent, is kept back or suppressed by their home journals.

Viewing the case thus, I will make a proposal. In this town is a newspaper called *The Eureka*, of which I am half owner and editor, and furnished at $1.50 per annum. I will send this to such as desire, at the price named, and thereby enable our deaf-mute friends to habituate their minds to Western life, and the prominent facts daily transpiring around us. In this way, those who read the paper will cease to regard Iowa as some far-off land of dreams,—somewhere beyond the great river, and whose existence, even then, is questionable. They will learn that we have our schools, churches, colleges, literary and other associations, and an industrious, enterprising and go-a-head people of the old New England or Yankee stock; and that, instead of fever and ague,—the bug-bear of people who live on the wrong side of sunrise,—we are inveterately afflicted with a rail-road fever, that nothing except the sight of five hundred iron horses tramping over our prairies will ever cure.

Instead, then, of writing letters to many different persons, for which I have small leisure, I would use the press; and as I write nearly all the editorials for the paper above-named, it would furnish a cheap and ready means of information to many who might profit largely therefrom in coming years; and let me hope that I shall not be accused

of undue selfishness, as the good would be more on their side than on mine.

I have in this article embodied some facts and reflections, on a subject often discussed among the deaf-mutes residing here, and by those who occasionally visit us from other states. These facts and reflections, so embodied, are intended to promote the welfare of those who are capable, but who are not so well situated as they wish, or as they might be. I do not intend to trouble the Annals again on this subject of emigration westward, but may possibly, with your consent, Mr. Editor, use that medium of keeping our Eastern brethren advised of the progress of their friends in this State, so far as can be done with propriety.

DACTYLOLOGY *VERSUS* WRITING.

BY JOHN R. BURNET, OF LIVINGSTON, NEW JERSEY.

LIVINGSTON, July 7, 1859.

MR. EDITOR:

An unusual pressure of business (resuming with slowly improving health undertakings deferred during a long period of partial disability,) prevented me from giving to your remarks and those of Mr. Carlin, in the last January number of the Annals, that consideration that would enable me to agree or disagree with you; and I doubt but the same hindrances that prevented my appearance in the April number, may make me too late for the July number. Still, as you kindly express a desire to hear farther from me on the subject, I will endeavor to lend what aid I can to the settlement of the question that has been at issue between us.

And first, I will endeavor to make clear a piece of mental phenomena in my own experience, which, it seems to me, you have not a correct idea of. I think that I conceive words as *sounds*, not as *utterances*,—as something vibrating in the ear, not as sensations derived from the play and contacts of the organs of speech. In addition to what I said on this point before, (Annals for January, p. 22,) I think, on

farther reflection, that there must be some connection (internal) between the nerves of hearing, and those that supply sensation and muscular power to the vocal apparatus. By virtue of this hidden connection, I suppose, after we have ceased for years to hear words *externally*, we still hear them *internally*,—that is, semi-mutes have the same faculty of internal speech which those who still hear possess, and which laborious instruction in articulation cannot impart to those who are totally deaf from birth or early infancy. Hence, the great advantage which this class of deaf-mutes enjoy over the deaf from birth, in the ease and fluency with which they read, and their more ready handling of words in composition.

Your remarks on this point do not seem to me to be quite to the purpose. I grant, for instance, that "the correspondence of sound (so-called) to the sense, has relation to the utterance more than to the ear," (p. 23;) (and I will add that it seems to me that our idea of the sense influences the utterance, so that, in most cases, the utterance is laborious, or slow, or otherwise,—more in sympathy with what the perception of the sense leads us to make it, than from any inherent qualities of the sounds themselves;) but still this applies just as much to those who still hear as to semi-mutes, and therefore, makes out no difference between the two as to their perceptions of words.*

This internal speech, then,—this internal perception of words as sounds or syllables, is what we mentally substitute in reading for the written or printed words before us. It is also what passes through the mind when we spell or write. I can write,—indeed, do usually write, without naming each letter as I write it; but cannot (at least beyond very short single words,) write without mentally repeating the successive syllables as I write them.† (When I spell with my

[* No; but if hearing persons fail to discriminate clearly between what pertains properly to sound and what to utterance, or mere organic movements, one who has lost his hearing may possibly mistake ideas of the latter for reminiscences of the former.—Editor.]

[† Some of whom we have inquired, say they are not conscious of repeating each letter or syllable in writing. Others we know do repeat the letters, but

fingers, however, an inveterate mental habit obliges me to name mentally each letter as I form it, except the last letter of each syllable, in forming which I usually repeat to myself the whole syllable. Thus, in spelling *how do you do?* I would repeat to myself, *h o how d do y o you d do?* Do you and other speaking persons do the same? and if so, has not the clumsy nature of this mental process something to do in making some people entertain the opinion that the forms of the manual alphabet could not be used as the direct object and instrument of thought? The mental process by which a true deaf-mute marshals up his words on his fingers must evidently be more simple than this.)

To return. We shall, I believe, agree, as an *axiom*, that this internal speech, which furnishes us with the machinery of thought and reasoning, is incommunicable to the true deaf and dumb.

The question then is, What is the best substitute for it? And this, I dare say, you will agree with me, is a question of the very first importance.

The German teachers say, artificial articulation will furnish the best substitute. Between us, this position need not be discussed, since we both hold in common, with, I suppose, all American and the majority of European teachers, that the mere movements and contacts technically called the oral and guttural alphabets, taken wholly disconnected from auditive sensations, are too fugitive and indistinct for the office which the theory assigns to them.

Mr. Jacobs maintains, with a zeal that challenges respect, however we may dissent from his philosophy, that his "signs in the order of the words" are the only substitute for this internal speech. I have discussed this question in the Annals already. And as the far abler pen of Dr. Peet is enlisted on my side of the question, (which, I suppose, is in the main, your own, too,) I will not bore your readers with any discussion of it here.

without necessarily repeating either the syllables or the words while in the act of penning them,—though in the act of framing the sentence, they repeat to themselves the sentence or clause before writing it. There is some difficulty in catching these evanescences on the wing.—EDITOR.]

There remain, then, the two forms, or two species of forms of words, the relative advantages of which are in dispute between us. I have argued for the forms of a manual alphabet; you, Mr. Editor, hold that the best form in which (true) deaf-mutes can conceive words is by the direct mental contemplation of their fixed forms, as seen on paper or the slate.

In my article in the January number, I stated various objections to your theory, some of which you have successfully met,—while others, it seems to me, still stand. I will briefly recapitulate.

In behalf of the manual alphabet, I urge, that it is easier to grasp and handle words as successions of familiar letters than as whole characters; that the succession of letters is essential to the idea of the whole word, and is analogous to the succession of syllables in our own internal speech, which seems so natural and even essential to the ready flow of thought; that, as in thinking, *we* speak to ourselves, so it seems most natural that deaf-mutes, in thinking, should speak to themselves,—that is, when they think by the aid of words, run over in the mind the same form of words they find most convenient to present their thoughts to others; and all will admit that the manual alphabet is superior to writing, both in convenience and rapidity, and yet more, in the life which can be lent to it by accompanying looks and gestures.

To obviate almost the only objection made to the manual alphabet,—its comparative slowness,—which, however, is hardly greater than that of deliberate speech,—I propose a syllabic alphabet. It does not appear to me that my plan for such an alphabet has met with an unprejudiced examination. For instance, in a private note, you state the main objection to be that it is too *complicated.* Now, if you will look into it again, and follow on your own fingers my descriptions for the positions for certain words, as *bridge*, *candle*, *thunder*, *morning*, (see Annals, Vol. III., p. 223–4,) I think you will be satisfied that my alphabet is no more "complicated" than written words themselves. In nearly

all cases all the letters of a syllable—in many cases all the letters of a word—are presented to the eye at once, but it is in their proper order, and the number of distinct characters to be committed to memory is not greater than in writing. Some letters, it is true, are marked by different positions, according as they are initial, central or final; but it is much the same with writing, which has capital and small letters, and in writing, various forms of letters.* Let me repeat, that my alphabet can be used to spell words *literatim* as well as the old one, and by a person equally new to both, can be acquired with as much ease. The only difficulty, is that which opposes the introduction of *all* new alphabets. We cannot, in a trial of a week or two, acquire the same facility in the use of the new one, however superior, which the practice of years has given with the old one.

Another important advantage of the manual alphabet as an instrument of thought, is its *tangibility*,—that is, like speech itself, it presents a form of words cognizable by a sense distinct from and less *objective* (perhaps I had better say less *external*) than sight. (If in this I have failed to convey clearly my meaning, by using the word *objective* in a sense different from that you attach to it, let me know of my failure, and I will try again.) The practical effect is that, as it seems to me, it must be easier to think in the forms of the manual alphabet,—regarded as tactile sensations,—while the eyes are open, and busy remarking the countenance and gestures of one's interlocutor, or taking note of external things generally. You, who hear, find it difficult to think—so I have often read—when there is much noise and conversation pressing into your ears; will not the deaf and dumb, by the same reason, find it difficult to think in or by aid of the written forms of words, when their eyes are occupied with other forms and movements? and will it not, therefore, be easier to think in or by the aid of the tactual sensations of the manual alphabet?

* Erratum.—Annals, III., 223, for *middle*-finger, read *little-finger*. Touching the back of the left hand with the right thumb represents *awl*, &c. Touching with right middle finger twice the back of left thumb,—*all*.

In behalf of writing, you urge that, from its fixity and permanence, its forms can be conceived and recognized as *units*,—so that deaf-mutes should be able to read faster by recognizing each word as a single character than by mentally going over the letters. Certainly they ought, if they *do* regard words as units, which is a question yet to be settled by observation and experiment. Mr. Carlin says he does; but his mental habits can hardly, it seems to me, be taken as showing what are those of the deaf and dumb generally. He is an artist, and hence, has a keener perception of form than is usual; and his business leads to conversing very much by writing. And after all, his testimony only amounts to this,—that some deaf-mutes of high mental cultivation recognize words, and get the sense directly from the words and their connection, without repeating mentally the letters of the words. I would ask Mr. Carlin whether, in conversing by the manual alphabet, he is conscious of any mental substitution of written forms for those presented to him, or by him, on the fingers? If not, then both forms are to him equally *primary* though parallel forms of words,—not as in the case of speech and writing, the one form merely representing and recalling the other.

Can we expect the deaf and dumb in general to display the mental power necessary to the possession of this double set of independent forms for words and signs for ideas? Will not most be content with one form as *primary*, referring the other to it as *representative?* and will not the manual alphabet, for the reasons already set forth, obtain the preference with most minds?

Time quite fails me to pursue the subject farther, and I am forced to leave some of your arguments without proper consideration.

In great haste,

J. R. Burnet.

[The following is the main portion of a note from Mr. Burnet, which came too late for the April number of the Annals:]

Notwithstanding the high value I attach to the testimony of Mr. Carlin, I am not yet satisfied that deaf-mutes regard

long words as *units*. They surely must recognize a word as a combination of letters in a certain order, which order, in a given word, is entirely arbitrary,—there being no adaptation of the parts to each other or the whole. The rapidity with which the mind glances over the letters may become by practice so great as to seem instantaneous,—that is, not appreciable, yet taking time enough to make a perceptible difference in the time of going over a sentence,—just as there was no appreciable difference in the moment of time at which the bullet fired at Key pierced his coat, his shirt and his heart, yet it certainly pierced the two former first; and had one garment been a hundred yards or two removed from the other, there would have been an appreciable instant of time between the two contacts.

Or, it may perhaps be agreed that well-educated deaf-mutes come to consider long words as we do single syllables. *Strength*, for instance, where the eight letters represent six distinct sounds, all pronounced at one effort of the voice. For those not accustomed to our language it would probably be easier to remember and repeat a word of three easy syllables, as *fortezza*.

But if it be granted that deaf-mutes do come to recognize words as *units*, still the difficulty stated in my former article remains. They have no mode of repeating them to others except by successive letters; and as we and they learn words, use words, value words primarily as means of communication, and use them as the instruments of thought, only by repeating words to ourselves,—by talking to ourselves,—it seems to me that words will be better adapted as the machinery of thought to the deaf-mute while he repeats them to himself under the same familiar form of manual spelling in which he always employs them in colloquial discourse. The life and significance which words have derived from their continual use in the warm and spontaneous expression of thought must, it seems to me, attach to the play of the fingers,—hardly to the mere visible characters on paper.

THE QUESTIONS BETWEEN MR. BURNET AND THE EDITOR.

BY THE EDITOR.

The different forms under which words may be actually perceived or mentally apprehended are the following:

1. As sounds addressed to the ear.
2. As motions and positions of the organs of speech apparent to the eye, sometimes called the labial alphabet.
3. As composed of written characters, and consisting of form or figure addressed to the eye.
4. As movements of the hand in writing,—motions in succession addressed to the eye. This may or may not be combined with No. 3, but is distinct from it.
5. As any variety of manual alphabet of the deaf and dumb, considered as addressed to the eye; consisting of figure and motion.
6. The motions and positions of the organs in speaking, felt as muscular and tactual sensations.
7. The movements of the hand in writing, felt in the same manner.
8. The movements and positions of the manual alphabet, felt also in the same manner.

Some Characteristics of these Forms.

In Nos. 1, 2, 3, 4 and 5, we are, in case of actual perception, merely passive recipients of impressions from without; at least, only active in holding and directing the organs of sense and the attention of the mind so as to receive the impressions. In Nos. 6, 7 and 8, we are, during the perception, in active voluntary motion, and take cognizance simply of the sensations connected with our movements.

Of No. 1, the perceptions involve no idea of space, or of figure or motion in space. The phenomena exist under conditions of time, but not of space. The same is true of Nos. 6, 7 and 8, considered strictly as muscular and tactual perceptions, though with these we always associate ideas of figure or motion,—one or both. These ideas,—as do, also,

ideas of time and its relations,—belong properly to a faculty distinct from any mere power of sensation. But those not born blind, connect their ideas of form and motion chiefly with visual objects. These ideas, therefore, belong properly under Nos. 2, 3, 4 and 5. We must be excused, if we seem to dogmatize; for the exploring of the depths of metaphysical inquiry which here open upon us, is no part of our present undertaking.

A peculiarity of No. 3 is, that the words or sentences are before us at once in their totality, and remain before us, subject to our attention, as long as and in whatever way we please; while in the other forms, not only each word, but each elementary portion of the word, is before us but for a moment, and then supplanted by the next following; their coherence is only in time, and they present themselves to our attention only in one invariable order,—the direct order of succession in time,—while the order of the first is only in space.

Sound is a product of motion,—not merely of vibrations of air, as light is of an imponderable ether,—but of varieties of motion and position, which cause and modify these vibrations. The sound accompanies the action of the organs, and varies as it varies. Not only rhythm and rhyme exist as perfect in the mere motions of the organs as in the sound itself, but all the varieties of articulation, with all the elements of which each separate articulation is composed, exhibit a complete correspondence between the sound produced, and the action of the organs producing it. In the different articulations, the impulses begin and end abruptly, or otherwise; they are continuous or interrupted; they glide smoothly, or roll, jar, or grate, roughly; they are thin or full, sharp or round, strong or weak. These and other peculiarities are in part the same in the motion as in the sound, and in part similar, or analogous. So far as these qualities are modifications or relations of time, the correspondence is perfect, and amounts to identity.

It is this correspondence, which inclines us to doubt whether Mr Burnet is not somewhat mistaken in regard to

his supposed reminiscence of sound, and to suspect that if it exists in any degree, it is yet so faint as to play no part, of consequence, compared with his distinct perception of the motions of the organs. We think it must be so with any one who has been for many years profoundly deaf; but are open to conviction, upon evidence to the contrary.

There is no intrinsic correspondence between the elementary sounds of words and the alphabetic characters employed to represent them. The association is wholly arbitrary. In most written languages, the characters are less in number than the elementary sounds, especially for the vowels,—besides that the same sound or combination of sounds is represented in several different ways.

In regard to the division of spoken words into their elementary parts, it may be of use to remark, that the division into syllables is not founded in the nature of the sounds as sounds, but in the exigences of the organs by which they are produced. Even thus it is no necessity, but a mere matter of convenience, and more or less arbitrary. It is less marked in the French manner of pronunciation, where less use is made of accent than in the English. We imagine it does not amount to much in the Polish and that family of languages, where the vowels make but a small figure. Even in English, it is often a matter of question how the division shall be made in writing or print. If we turn to the dictionary, we have *found-ed* and *foun-da-tion.* So we have *sour* in one syllable, and *pow-er* in two. Where the speaker actually divides the word distinctly into syllables, we of course perceive the division; but we must equally perceive the still further division into the elementary sounds, of which most syllables contain more than one. We perceive the syllables in their succession, and we equally perceive, in their proper succession, the simple sounds which compose the syllable. In the monosyllable *strength*, we have at least six distinct elementary sounds,—as many as in the trisyllables *san-i-ty*, *ref-u-gee.* Many, if not all, of these (so-called) elementary sounds, will, on a nicer analysis, resolve themselves into distinct and dissimilar parts. In per-

ceiving words, all these must be noticed sufficiently to distinguish one word from another.

Perception of a Complex Object as a Unit.

Confining ourselves for the present to actual perception, let us inquire, what is it that constitutes an individual thing, or a *unit* in perception, and hence in language as an object of perception? Absolute simplicity is by no means essential to this unity of an object. The objects of perception are generally, if not always, complex. To know a complex object thoroughly, we must know its several parts, and their relations to the whole. We must also know the whole as one thing, and as at the same time composed of these parts. The seeming paradox is one of nature's making, not ours, and its explanation is no part of our business, just now. It may be said of these parts again, that to know them thoroughly, we must know them in the same manner, if they are themselves complex. To know any object perfectly, we must know all the parts into which it may be again and again divided and subdivided. To this extent, of course, our knowledge of a concrete object never reaches, and thus we know nothing perfectly. We consider ourselves as knowing a thing, when we know it well enough to distinguish it from others. We say we perceive it, when we notice it distinctly enough so to distinguish and thus to recognize it. Any individual thing may form a part of another larger whole, which shall be itself one object in perception. Things are presented to us as connected in time and space, and we must so perceive them, when we perceive them at all; but we form the groups, larger or smaller, for ourselves.

Absolute simultaneousness of impression on the sense is not essential to unity in perception. But, on the other hand, some exercise of memory seems necessary to the perception of a complex object. Thus, in hearing a word uttered, the sounds which compose it pass through the ear in succession, but are gathered by the mind, and grouped into one whole. So in the case of sight, the attention is directed to this part of the object and that in succession, observing

the parts separately and their mutual relations; and then combines them into the whole which they compose.

In regard to the number of parts which may be embraced in one whole, we know not of any absolute limit; but the difficulty of the operation seems to be increased with the number of the parts which must be distinctly noticed. This difficulty, however, abates when the parts themselves are things made familiar by repetition, and still more, as the whole itself becomes a familiar thing by the same means. The quickness with which a complex object may be recognized in perception, will depend more on this previous familiarity, than on the number of the parts which compose it. The greater the number of parts to be distinctly observed, the greater will indeed be the liability to mistake by resting satisfied with a superficial attention, and so confounding the object with another differing from it only in some minute point. Familiarity may lead to this superficial observation; but yet it renders a careful discrimination less difficult and more speedy. To take an illustration from among visible objects, let us suppose a person sees, for instance, a company of soldiers. If he has often seen the same before, he recognizes it for the same at a glance. If he has made himself quite familiar with the faces of the men and the order of their arrangement, he will be able to run his eye quickly along the line, and perceive whether the company is entire, and every man in his place. The more frequently he has done this, the quicker will he be able to do it. And, this done, he has the idea of the company as a unit, and as entire and in order. But where his purpose does not require this accurate examination, he yet recognizes the object, from a more superficial and hasty inspection.

From these premises, it is to be inferred that not only syllables and words but whole phrases and sentences may be individualized. The tendency to this in languages which remain long unreduced to writing, is seen in those long words in some savage dialects, which are made up by combining several words into one. This tendency to unite words exists everywhere in the speech of the unlearned. The

phrase, "for aught I know," occurs to us now as one which we used to hear made into a single word,—pronounced *for-ten'-or*,—and thus liable to be apprehended as a distinct word in the language. The mind individualizes familiar phrases before it thus abridges them, and when they remain unabridged.

Of course, one cannot recognize a complex object, in perception, more rapidly than it is presented to his sense. When words already written or printed, are present distinctly and clearly before the eye, there is no limit of this sort. In the other forms of words, the parts may succeed one another either too rapidly or too slowly for ready perception. There is always a just medium in this respect. Greater familiarity renders greater rapidity possible and desirable. It is an imperfection in any form of words, if their exhibition in that form cannot keep pace with the power of ready perception.

Association of the Forms of Words with their Meaning and with Each Other.

The office of words is to convey ideas. By the law of habit, the meaning of a word becomes associated in the mind with its form, so that one suggests the other. It is ordinarily the case that the idea is more intimately associated with some one or more of the forms which are known, than with the others; and has with the latter an indirect, if no immediate association. Particular habits may also be formed, as well as general ones, so that a person shall associate the meaning of certain words more closely with forms of one species, and of other words with forms of another species. By the same law of habit, the different forms of words become associated together, so that the actual perception of one form suggests the image of another, which is a re-presentation of it as apprehended in a former perception. Thus one form of the word suggests to the mind one or more other forms, at the same time that it suggests the meaning—whether it does this by itself alone, or indirectly by the other, or by means of both.

The habits which are formed of associating the meaning

of words with one form or another, and the associations induced between different forms of words, are matters of much consequence. Some of the associations between different forms, according to the division laid down at the outset, are unavoidable and indissoluble, from our very constitution; as much so as is that of secondary perceptions of sight with the primary sensations. Others are the result of circumstances and of special training; which also determine the particular form or forms with which the meaning shall be primarily connected. Some of these mere habits, when once fixed, are exceedingly hard to be supplanted, and the difficulty may in some cases amount to an impossibility.

In regard to the form with which the meaning is primarily connected, it may not be always one single form alone. Two forms may be themselves so closely and invariably connected in our thought,—as, for instance, the sound may always suggest the motion of the organs, and the motion, or the thought of it, may always suggest the sound,—that we cannot say the meaning is associated with one apart from or more than the other. And, if ever we acquire the habit, so that these two forms become connected in like manner with the written form, in that case, also, we cannot say that the meaning is associated with any one of the three more closely than with either of the others. That an approach to this is actually made by some persons, we believe to be a fact.

It is commonly said, indeed, that written words have to us no significance except as the representatives of spoken words; and the restriction is generally carried still farther, limiting the power of immediately suggesting ideas to the word considered simply as a sound. From this notion, in either shape, we respectfully beg leave to express our dissent. The habit of relying upon the spoken form may make it easier for us to take the sense in that way, though it can hardly be doubted that we often get the sense before we have time to repeat the words, even mentally. When, for instance, we see over a door, the words "no admittance," or "walk in," we do not have to wait to pronounce the words

before we know what they mean. What scholar, when he comes upon such a phrase as *de mortuis nil nisi bonum*, does not apprehend the meaning long before he can repeat the words?

In fact, this repetition of the spoken form of the words in our reading should be viewed as a mere habit, rather than as a necessity for the conveyance of the meaning. Let us suppose a person setting about the study of a new science,—chemistry for instance. He is to be introduced to a variety of new substances for which he knows no name. We will suppose, also, that he never hears their names uttered, but only sees them represented by Hebrew words,—he having never learned the Hebrew pronunciation, or the sounds of the letters. Could not the pupil understand a text-book in which the substances were thus indicated? We do not imagine that an accomplished mathematician attaches a name, or a sound, to each mathematical symbol every time he sees or employs it. Yet it is to him the sign and vehicle—the immediate representative—of an idea.

Furthermore, in our silent reading, is it articulate sounds that we repeat to ourselves mentally; or is it rather the motions and positions of the organs proper to the sounds? If a sound, is it a loud-speaking, or a whispering sound? is it the sound of our own voice, or that of some other person? If, indeed, we are reading the production of some public speaker with whose tones and manner we are familiar, it is his voice which seems to resound in our ears. So, if we are reading, or mentally repeating, any passage which we have been accustomed to deliver orally, we may seem to hear our own voice. But do we not ordinarily read to ourselves, without seeming to hear any particular tone or quality of voice? The idea of the sound becomes a generality, quite void of that vividness and distinctness which pertains to concrete realities.

But how does it appear that the conception of the motions and positions of the organs is not equally indistinct? The following consideration seems important. Before we actually utter a word, we must have a conception of it, similar

to what we have when the spoken word is simply remembered, or is suggested by its written form in reading. What we do when we speak is simply to perform a set of motions. Before we can perform any voluntary motions, we must have a correct conception of them; or rather, a conception of the sensations proper to those particular motions. In order to speak, it is not necessary to know any sound, provided, without this, we can know how to move the organs. In actually speaking, it is not absolutely necessary to have any conception of sound, but it is necessary to have a conception of the motion of the organs. If we have that in mind distinctly and precisely, it matters not whether we have or have not a vivid idea of the sound. It may hence be inferred that ordinarily, if not universally, in repeating words mentally, the more prominent part of the operation has relation to motion instead of sound.

The respective advantages and disadvantages of the several forms of representing words.

There is a choice between the different forms of representing words; though no one is preferable in all respects, some having one advantage and others another. We have already, but in part only and in brief, indicated some of their respective characteristics.

Sound and speech are capable of rhythm and rhyme, and so of rendering the aid which these are well known to afford to the memory; and with no such device, it may be true that they so fall in with the mental organization, in many and possibly in most cases, as to be a better vehicle for the memory than the written form could be alone. The forms which are voluntary, have a certain advantage in relation to memory. In this respect, the motion of the organs in speech has the advantage over the mere sound of the words. The voluntary repetition of a word or series of words, even though by the silent movement of the organs, will ordinarily serve better to fix them in the memory, than would the mere hearing of the words. And, when we hear, the mental repetition of the movements,—made inseparable, by habit, from

the hearing of the words,—does more, we suppose, to link them in the memory, than does the hearing itself. This may, indeed, depend much on individual organization. In listening to the "voices of nature," do we not always find it more easy to remember any succession of external sounds, if we figure them to ourselves as framed after some fashion by our own vocal organs? By voluntary bodily motion, we are able to carry our attention along a line of things in order and without interruption; and there is probably a law of our organization, by which a series of voluntary motions is readily linked together, so as to be again reproduced at will in the same order. The memory is, however, by no means limited to this mode of operation. In viewing carefully an assemblage of objects presented to sight, we naturally assist the attention, by pointing the finger to each, one after the other; but most persons could really fasten the objects and their order in the memory, more speedily and surely by the use of the eye, than by relying on the repetition of the names of the objects, or by performing a series of gestures, or motions, one for each object. Suppose the assemblage of objects to be a band of men, or a collection of pupils in a school, would it not be so as we have stated? Why is it, then, that when we have an assemblage of words to commit to memory, present to the eye in writing or print, that we speak them over to ourselves, either actually or mentally? Is it not from early habit, rather than from the intrinsic nature of things,—we having learned to speak before we learned to read, and never having put ourselves to the task, and trained ourselves to the habit, of remembering a series of words by means of their visible figure alone? May not the case be in this respect as Mr. Burnet thinks it is with his syllabic alphabet compared with the common manual alphabet, when he claims that the only difficulty about it is that no one will learn it, so as to get accustomed to its use? It is certainly true that the sight, alone, when properly trained and exercised, has certain advantages for the memory over every other faculty. Persons sometimes reason as if the memory could act only through a single sense; whereas, it is a prin-

ciple of the human mind, that whatever we are cognizant of through any of our senses, is capable not only of being revived in the internal mental operations, but of having an agency in calling to mind other ideas, whether ideas of the same sense or of other of the senses.

Only writing or print affords the advantage of a form which has permanence and presents simultaneously whole words and sentences. This is a great advantage for easy and ready perception, and also for committing language to memory, whether it is done by simple inspection, or by repetition in some other form. This form presents also advantages for judging of and apprehending the meaning of a passage, and subjecting it to close scrutiny; as is perfectly obvious when we have anything long and complicated to examine. It does not fall within our present purpose to speak of letters as the repository and treasure-house of thought and knowledge.

Mr. Burnet labored under a misapprehension when he wrote,—"In behalf of writing, you urge that, from its fixity and permanence, its forms can be conceived and recognized as *units*,—so that deaf-mutes should be able to read faster by recognizing each word as a single character, than by mentally going over the letters." What we actually said was, (in reference to writing compared with the manual alphabet,) "The group of characters standing before the eye, is more readily grasped by the mind, and with a less painful effort of the attention, the remission of which in the other case, for an instant, is fatal."(—Annals, X., 4, p. 233.) This did not imply that words read on the fingers could not be apprehended as units at all, but rather the contrary. Neither did we employ the phrase, "a single character," as above; and would hardly choose so to apply it. A word is like a single character, in that it represents a sound, and in that it is a unit composed of parts; and as with a word, so with a letter, the essential parts must be recognized in recognizing the letter itself. The difference in them as objects of perception, and aside from the office of words to stand for ideas, is that letters are not, and words are, recognized as made by

different combinations from a certain number of distinct elements, which we call "characters." Mr. B. wrote, undoubtedly, without having time to reperuse the previous articles.

The form under which any certain assemblage of words will adhere in memory, depends much on the process by which it was committed to memory. If this was by hearing the words repeated, (or sung, it may be,) by another person, we shall, for some time at least, recall his tones and other vocal peculiarities. If we learned it by repeating it aloud ourselves, we shall recall in the same manner the tones of our own voice. If by silent reading, our ideas of the sound may be very vague, and almost nothing compared with those of the vocal movements. If in this process we have had the words before us in clear distinct type, on a fair and open page, the impressions made on the visual organs may remain distinctly blended with the others, and furnish important aid to the memory. Who is there that reads, and is not aware that sometimes he has been helped to recall a name or word that was slipping from his memory, by a recollection of its appearance to the eye, its meaning being more closely linked in his mind with the form of the word than with the sound? Are there not those who as certainly represent to themselves, more or less distinctly, the forms of the words which they hear spoken, as they do the sounds when they read or write?

Some of the forms under consideration, are slow and cumbersome in actual use; and are proportionally slow and cumbersome in the operations of memory, or the workings of thought. A form may also require so painful an effort of the attention, and thus so engross the attention upon itself, as to hinder the ready suggestion either of the meaning, or of the parallel form through which the meaning would be indirectly suggested; and even the component parts or elementary characters may be so difficult in this respect as to prevent the ready grouping of them into the whole word. The manual alphabet presents such difficulties to those who are little used to it; and has probably in this way, even when perfectly familiar, an intrinsic disadvantage, as compared either with speech or writing. Though more rapid in

execution than writing, the manual alphabet is yet tediously slow, and being more exacting upon the attention, it would be decidedly inferior to writing on the whole, were conveniences and circumstances always favorable for the latter, and could persons address each other face to face by writing, and exhibit the writing while executing it. Though writing is slow in execution, yet reading may be far more rapid than speech, and writing need by no means be slow, as a vehicle of memory and a medium and instrument of thought, even to one who relies on the visible figure it presents.

Those forms of representing words which are objectionable in themselves, will attach their disadvantages to the other forms with which they are so closely associated as to be uniformly suggested by them; as in the case of those of the deaf and dumb whom habit obliges, in reading, to spell out each word on their fingers, either actually or mentally; and it may be that speaking persons are often retarded in their reading, by their habit of converting each written word into a spoken one. We think there may be proof-readers who can, to say the least, inspect the orthography and typography of each word, and read more rapidly than the spoken words can pass through the mind. But to take the sense of what one reads,—which even a proof-reader is required to do, to some extent at least,—will require more time, ordinarily, than simply to inspect the words. It may be true that, though we can recognize words and familiar expressions by the eye alone, and apprehend the meaning immediately therefrom, yet that, in order by the same means and with a corresponding rapidity to gather up the sense of an assemblage of such words and expressions arranged in a sentence, it would not be enough simply to throw off our old habits, but we should need also to be drilled into new ones. With our existing habits, it cannot be said that we are retarded by converting the words into the spoken form; while it may be that with different habits, greater expedition would sometimes be possible, especially in cases where the thought and the construction are such in themselves as might be apprehended with great rapidity. The suggestion of a parallel

form of words—if such as can pass through our minds as rapidly as can the ideas conveyed—may possibly work no hindrance, as it must, if the latter could outrun the former. If we have occasion to think very slowly, and subject everything to very close scrutiny, the spelling of each word on the fingers might be no obstruction in reading from a book. The case might be different, if we had the matter to remember or to compose, in the form of the manual alphabet. For though we should wish to work slowly on the whole, we might need to run rapidly between distant portions.

We have observed that the rate at which we can repeat any of these forms of words in the mind, seems to be proportioned to the rate of speed at which we can actually execute them, by voluntary movements; and our own opinion is, that the rates are not only proportioned, but equal. That it is one or the other of these, whenever we imagine ourselves repeating the words—that is, executing the movements, we do not doubt. And this appears to be what we do, when in reading we convert the visible into the spoken form, and in the other cases analogous to this. Yet we cannot presume ourselves able to trace all the subtle workings of the mind; and must confess ourselves not fully confident that these same forms may not in some other processes, flit with electrical rapidity through the mental consciousness.

The speaking person has some peculiar difficulties in reading the finger spelling,—greater at first than after more practice,—from his habit of pronouncing to himself each letter which he reads on the fingers. Not knowing what the word is, when it is half spelled, he yet commences dividing it into syllables, and perhaps falls into a puzzling mistake; or the separations between the words not being properly marked, he makes into a syllable the end of one word and the beginning of another. Add to this, that some of the letters escape his notice and fall out, and some being indistinctly made, are mistaken for what they are not, and in the transition from one character to another, letters appear to be made which were not intended,—and we are at no loss to see how it sometimes happens, that if he has been able to retain

in mind and could write down the jumble of letters, syllables and words into which he has translated the finger motions, he would still have a hard task to decypher it. He would probably do better, if he could present to his mental eye the written forms of the characters, instead of the spoken, or at the same time with them, and depend on those for the grouping.

The deaf and dumb, on the other hand, group the finger letters as they appear to the sight, and by familiarity with those groups which form words and phrases, become able to recognize them with great rapidity. The speaking person may by practice gradually acquire the ability to recognize them in the same way, though not to dissever them from associations with speech.*

Let it never be forgotten, however, that the rapid reading of the finger spelling on the part of the deaf and dumb, requires great previous familiarity with the words and phrases employed. Each complex group must be made separately familiar, before it can be readily recognized. Not only so, but we know how much we are aided in apprehending what we hear, by a reference to the connection ; how by this means we supply many words which would otherwise be lost through indistinctness and rapidity of speech; much more is this aid required in reading the manual spelling; and it depends, we know, on a thorough knowledge of words, and of the usage and laws of the language. So that, though it is possible to spell on the fingers faster than writing can be employed, yet we can avail ourselves of this rapidity in but a comparatively small degree, in addressing the pupils in our schools.

As for the idea that the reason why semi-mutes sometimes make so great attainments in language, is that they handle

* Mr. Burnet's habit, as he describes it, of repeating to himself each syllable, in using the manual alphabet, we rather think must be peculiar to him. Our impression is, that the common way is to repeat simply the letters, and in rapid spelling, to repeat them of course in a rapid and slurred manner, so that if thus uttered in the ear of a bystander, he would be unable to make out the words. In this shape, they can hardly serve the purpose, as remembered sounds, of directly representing ideas.

words under a better form, we doubt whether it is borne out by facts. We could bring negative instances, of very poor scholars from the speaking portion of our pupils. Of course, the advantage which such have by their previous knowledge of language, is in every case considerable; but the instances of decidedly superior attainment, are usually from that class who had obtained through the ear enough of common language to be able to make headway in books with comparatively little aid from the teacher. It is to books, and to language presented to them in the written form, that they are mainly indebted, for the standing they take above their less favored fellows. The inference is rather in favor of a more skillful and thorough trial of the written form of language for all of our pupils.

In regard to the property of "*tangibility*," as pertaining to the manual alphabet, we cannot think the advantage suggested by Mr. Burnet, of any consequence. For, speech has the same tangibility; and if surrounding noises render it difficult for us to think in words, for the reason which Mr. Burnet names—that words are sounds, it is to be remembered that manual words are also visible forms; and we know not but that the deaf and dumb associate the visible forms of the finger-letters with the muscular and tactual sensations, as closely as we do the sounds of words with the felt articulations; and indeed, when they think in the manual language, they may in fact array the words in the visible rather than in the tactual form, and so far as they do this, the interference with external observation will be in full force, as much as though they pictured to themselves written or printed words. We are not, moreover, inclined to allow the principle here assumed. Ideas of one sense interfere with ideas and observations pertaining to another sense, as truly, if not in an equal degree, as with those of the same. Notice, for instance, the eye of a musical performer.

A desirable quality in a form of representing words, especially in instruction, is that of being, as a form, rapidly and readily apprehended in perception. Thus, less mental effort will be wasted in this act, and more left available for other

purposes. Such economy is important in all education, and especially for the deaf and dumb. Another desirable quality is, that the form be itself adapted to secure the attention. Another, that it be adapted to impress itself on the memory. Another, that it facilitate the linking of an orderly series of words together in the memory. Another, that it favor the comparison of the several parts of such a series, the apprehension of their relations, and thus of the meaning they collectively express. So, in regard to purely interior processes of thought,—so far as any form can be readily and rapidly handled as a mere (interior) form, or so far as it will subject itself most readily and fully to the combining, or again, to the comparing and judging faculty,—it will be so far an eligible form. Rapidity in execution is, of course, an exceedingly desirable quality, less important in the early stages of instruction than subsequently, but on the whole, a prime desideratum, as respects the instruction of the deaf and dumb. Sundry points of convenience are also to be considered. Of the forms in actual use,—some having one advantage, and some another,—we must select and combine as we best can on the whole; always aiming, be it remembered, to employ each in such a way, as to make the most of its advantages, and abate, as far as possible, its defects.

The Formation and the Modification of Habits.

The internal processes, as the external processes, with language, are of two sorts,—receptive or passive, and productive or active; the one, in which we perceive outwardly or recollect inwardly, and the other, in which we express externally or merely embody internally. The correlative outer and inner processes will closely resemble each other. This is true as respects the active processes; for the internal embodiment of our thought always precedes its external expression. It may be, perhaps too hastily, presumed to be in all respects the same when it stops short of the expression as when it goes out. It is necessarily the same with a part, but not necessarily with the whole. In regard to recollection, it is true that the object of thought may re-

semble, either the simple object in perception, or the associated ideas, or both; and it is possible, in cases, that these associated ideas may be the agencies by which the objects perceived are retained or linked together in the memory.

It is therefore clear, that it is natural for us, as Mr. Burnet observes, to employ in our mental processes,—one description of them, at least, we would add,—those forms which we use in actual expression, to the extent, at least, of a portion of the latter. It is to be remarked also of those forms, that they must consist in part, at least, of ideas of voluntary bodily motions, and whether or how much this would render it natural to prefer them as such, is worthy of consideration. As we have intimated, the active internal process does not necessarily go beyond the ideas which come through external perception. Still it may naturally embrace ideas of bodily motion. Or, there may be a natural tendency to this.

The purposes of the intellect are not, however, always best served by the course to which nature inclines, undisciplined and untaught. And if nature in this matter will have her way, and take the lead, we should at any rate aim to set her upon the track which is to be preferred.

If nature indeed confines us rigidly to the forms which we use in communication,—and which consist of our voluntary actions,—as the primary forms of words, with which alone the meaning is immediately associated, we are then shut up to three varieties, viz., motions of the vocal organs, motions of the hand in writing, and motions of the fingers in spelling, each considered simply as muscular and tactual sensations. The other varieties are but products of these motions, viz., of the first above-named, two products, sound and visual impressions, (labial reading;) of the second, two, the characters traced and become permanent objects of sight, and transient impressions from the visible motions of the hand; of the third, impressions from the visible motions and positions of the fingers. These five, which are products of the others, have no relation to us except as impressions on the sense; in which we are passive, even though they be products of motions of our own. Now, it is to be observed,

that sound,—which is commonly regarded, and sometimes exclusively so, as naturally the primary form of words,—here takes rank along with those regarded as least natural, and as requiring something to intervene between them and the idea. If words, considered simply as they sound, in the bodily or mental ear, can serve as a vehicle of ideas or an instrument of thought, analogy would lead to the conclusion, that the same service might be rendered by words considered as visible forms. But if, as sounds, they cannot, from the nature of the case, fulfill these ends without calling to their aid the felt motions of speech, it may be inferred that as written forms, they cannot do the same, without calling in some variety of motion,—not necessarily that of the hand in writing, but either this, or that of speech itself, or of the manual alphabet. But if the necessity exists not in the nature of the case, but the association results from habits acquired, the question then arises in reference to each habit by itself, whether it is, or is not, practically avoidable.

If it be true that words as sounds, without consideration of oral movements, can serve the purpose of words, then it is *not* to the fact that we use or make them ourselves in addressing others, or that they are voluntary motions of ours, that their efficiency is due; but simply to the familiarity, which results from their often passing into or through our minds. It is true, however, that the formation or construction of any thing, gives us a familiarity with it, and a stronger impression of it on our minds, than we can easily get in any other way. As a mastery over language, in expressing our thoughts, or embodying them for our own use, is never obtained except by practice in the thing itself, so is it also with any particular form of representation. But this familiarity and this mastery comes, we think, as a fruit rather of the operations of the designing faculty, than of anything mechanical. So that, if merely by the conceiving or imagining power, we arrange words, after the written form, in a sentence or composition, even if we give them no outward expression, we gain the end to a considerable degree. If the form should imprint itself on paper at the mere bid-

ding of our will, with no bodily motion of ours, we should have the advantage in question without abatement. We are, of course, far from denying that living intercourse with others, has peculiar advantages for making words familiar, and impressing them strongly on the mind.

In regard to the formation of habits in relation to words, the case of the deaf and dumb is very different from that of the hearing. Their habits are not formed so early, or so much by actual use. The medium which they find easy and ready at hand, and therefore natural to them, is gesture and pantomime; and they have little to do with words for a long time, except under the instructions of the school. Their habits will depend therefore on the instruments and the methods employed in their education, and also on their other mental peculiarities, as well as their acuteness and activity in shaping and modifying their habits for themselves.

We have already and unavoidably anticipated much that would fall under this head, and what else we would say is to be inferred from the principles we have sought to make clear,—with a dry and tedious minuteness, we are aware, which probably a more deliberate preparation would have enabled us to abridge.

We think it important to begin the instruction right, though we would not attach so much importance to the mere beginning, as did Mr. Barnard, in his paper on this subject, in one of the Paris Circulars. A general habit is not formed by a mere beginning, so as to be incapable of change. We know that children who begin their reading with the habit of spelling out each letter, change this habit for that of pronouncing merely the whole word. Just so it must be, that a deaf-mute, if he has formed the habit of spelling written words on the fingers, may at least exchange these motions for the motions of the hand in writing. He can still modify his habit so as to perform these motions in a very rapid and slurred manner, and the striving for greater rapidity may lead him finally to indicate each word by a very slight motion indeed. It would then seem hardly important whether or not he should finally drop the motions altogether.

If the deaf-mute pupil be made accustomed to the use of the written word, by early and proper training, it need not become associated with any motion at all, so closely as invariably to suggest it. We do not ordinarily associate distinct ideas of motion with fixed forms of visible objects. Written forms do not, to those who hear, suggest ideas of the motions of the hand in writing. The case is different with sound. Sound, of any kind, when made by beats or successive impulses, naturally gives an actual impulse to our muscles, and inclines us to beat the time, whether regular or irregular. Adding to this, the close correspondence between articulate sounds and articulate motions of the organs, and we need not wonder that the former, almost if not quite invariably, suggest the latter. We can see also how the habit is formed by which the written word suggests the spoken word. When we learn to read, we do it by actually pronouncing the word, at the sight of it on paper. When we read to others, or read in any case aloud, we of course do the same thing, and thus the habit becomes too inveterate to be laid aside. But the deaf and dumb may easily be trained to have nothing suggested but the idea, or if more, nothing more than the pantomimic sign. He may know indeed the manual characters, but the sight of the word need no more suggest these or any other motions for the letters, than the same sight of the word need suggest to the hearing person the motions of writing, which he also knows. The fact that he uses writing in communicating with others, will not cause the deaf-mute to think in the motions of the hand in writing, rather than in the fixed forms of the words. For, these forms,—the products of the motions,—are the prominent things at the time, and of such a nature as to take a permanent hold upon the mind. If, in communicating with others and expressing his thoughts, he uses writing or the manual alphabet indifferently,—not giving to either an overwhelming preponderance,—we think he will use sometimes one and sometimes the other in his interior mental processes.

That the deaf and dumb, as ordinarily educated in our